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National Advisory Committee on Drugs

A Review of Harm Reduction Approaches in Ireland and Evidence from the International Literature

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A Review of Harm Reduction Approaches in Ireland and Evidence from the International Literature

Gerard Moore, Philomena McCarthy,
Padraig MacNeela, Liam MacGabhann,
Mark Philbin, Denise Proudfoot

Dublin City University

May 2004

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Foreword – Minister of State

I am happy to welcome this new review of harm reduction approaches from the NACD. This report arises out of Action 100 in the National Drugs Strategy which called for research into the effectiveness of new mechanisms to minimise the sharing of equipment and to establish the potential application of new options within particular cohorts of the drug using population. It is part of the Government's commitment to building knowledge to inform policy development and appropriate strategies.

As the report points out, harm reduction approaches can make a significant contribution to the health of drug misusers and they form an important part of Irish drugs policy. However, in common with all approaches to the drug problem, harm reduction policies need to evidence-based. It is for this reason that this review of the international literature on harm reduction and the Irish experience of harm reduction approaches is so welcome.

The research and analysis provided by the NACD is particularly helpful to the policy development process and also to developing best practice in service delivery. This report examines how we deliver harm reduction in Ireland and where we can enhance and improve our service delivery as part of the overall National Drugs Strategy. I have noted the conclusions of the review and have no doubt that they will inform the ongoing review of the Strategy.

Finally, I would like to record my appreciation of the on-going work of all of the members of the National Advisory Committee on Drugs, in particular, its Chairperson - Dr. Des Corrigan, its Director - Ms. Mairéad Lyons and its Research Officer - Ms. Aileen O'Gorman.

Noel Ahern T.D.
Minister of State with responsibility for the National Drug Strategy

Foreword – Chairperson NACD

It is clear that our primary aim is to reduce the demand for drugs and to prevent people from taking drugs in the first place. However, we are faced with the reality that many people take drugs and thus they face risks to their health. More importantly, sharing equipment used to administer drugs carries with it a high degree of risk of injury and contracting blood borne infections. As patterns of drug use change, new ways of administering drugs and new drug preferences emerge, we need to be ever more vigilant in how we communicate with drug users about minimising harm to their health.

Commissioned by the NACD in response to Action 100 of the National Drug Strategy, this Review was prepared by a team from Dublin City University (DCU) and the NACD is grateful to them for their work. It is clear from this Review that Irish harm reduction services need to be more flexible, be available in all health boards and in areas of greatest need. Alternative approaches should be considered to support the expansion of harm reduction services such as Community Pharmacy Needle Exchange.

Moreover, this Review shows that harm reduction programmes do not increase experimentation with drugs and that they can limit the spread of blood borne infections. Harm reduction services should have the flexibility to cater for the provision and/or exchange of a range of drug use paraphernalia so as to reduce the risk of contracting drug related infectious diseases and other harm. We know that Hepatitis C Virus, in particular, is a very resilient organism and this has implications for sharing any piece of drug taking equipment. As part of that greater flexibility, there is a need for enhanced training for service providers. Service provision to drug users in prisons should mirror that available in the community.

We know that we must strive to continuously improve our services to drug users and take every opportunity when in contact with drug users to give them accurate information about risks of harm with a view to firstly helping them modify their risky behaviour and ultimately encouraging them into services.

In presenting this Review to all those involved in responding to the drugs phenomena, the NACD hopes it will help stimulate and inform discussions among policy makers and service planners across all sectors.

Dr Des Corrigan
Chairperson
NACD

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Abbreviations

ECAHB	East Coast Area Health Board
ERHA	Eastern Regional Health Authority
HBV	Hepatitis B Virus
HCV	Hepatitis C Virus
HIV	Human Immunodeficiency Virus
IDU	Intravenous Drug Use/User
IDUs	Intravenous Drug Users
INCB	International Narcotics Control Board
NACD	National Advisory Committee on Drugs
NAHB	Northern Area Health Board
NDS	National Drug Strategy 2001-2008
NEPs	Needle Exchange Programmes*
SEPs	Syringe Exchange Programmes*
STDs	Sexually Transmitted Diseases
SWAHB	South Western Area Health Board
WHO	World Health Organisation

* NEPs and SEPs are used interchangeably in the literature and are understood by the authors to mean a service that offers a range of drug-taking equipment and health care advice to IDUs

Executive Summary

In 2002, the National Advisory Committee on Drugs (NACD) commissioned a review of the International Literature on Harm Reduction and of services available in Ireland, as part of its response to Action 100 in the National Drug Strategy 2001-2008. Following open tender, Dublin City University was awarded the contract. The research team reviewed the international literature and carried out primary research in health services in Ireland on approaches to harm reduction. This report considers the evidence and the summary here presents the key findings.

Harm reduction is a concept aiming to prevent or reduce negative health consequences associated with certain behaviours. In relation to drug misuse, harm reduction components of comprehensive interventions aim to prevent transmission of HIV and other infections that occur through sharing of drugs and non-sterile drug-taking paraphernalia.

One of the trends evident in problem-drug-use research is the increasing emphasis on measures to limit sharing of equipment used in drug administration. The rationale for this approach is that it reduces the potential for harm associated with drug use, as part of a wider move toward harm reduction. Illicit drug use is a behaviour that exposes the drug user to a variety of risks. There is a relatively high rate of opiate drug use in Ireland generally estimated at 5.6 per thousand of the population (Kelly, Carvalho, & Teljeur, 2003). In a European context the highest estimates are reported for Italy, Luxembourg, Portugal and the United Kingdom. Estimates are lowest in Austria, Germany and the Netherlands, placing Ireland in the middle band of the estimates for problem drug users in the population. There is extensive scope for health and social gain among problem drug users, particularly among groups that are challenging to engage, such as young drug users and those who are homeless or in prison. The utility of harm reduction techniques in reducing shared use of drug-taking paraphernalia therefore merits systematic investigation.

The aim of harm reduction efforts is to minimise the risks stemming from shared use of drug-use paraphernalia such as syringes, pipes, spoons and filters. A number of strategies are used, including increased flexibility and responsiveness of drug services, needle/syringe exchange programmes (NEPs/SEPs), exchange of other drug-use paraphernalia, tailoring initiatives to the characteristics of target groups, safe injecting facilities, and education and support of drug users who share drug-administration equipment. These methods are designed to lower the negative impact on health and functioning that is associated with drugs misuse, particularly as a consequence of infection with blood-borne diseases.

Harm reduction principles can be used successfully to address the adverse impact on health outcomes and Quality of Life associated with sharing drug-use equipment. The preliminary primary research into practices among Irish drug services indicates that harm reduction methods are being used in Ireland. However, the general picture is that there is significant scope to expand drug services' role in delivering flexible and responsive initiatives to target shared use of drug-taking paraphernalia. For instance, the restricted opening hours and limited number of needle exchange services may contribute to continued sharing of equipment. Changes in patterns of drug use may require concomitant changes in the delivery of health services.

There are a number of public concerns regarding harm reduction measures. These are related to perceived risks to public health and safety arising from criminal activity associated with drug use, and to the unsafe disposal of drug-taking paraphernalia. These concerns have impacted on the development and uptake of harm reduction programmes in Ireland and abroad. Anxieties related to community presence of harm reduction programmes are difficult to allay. However, there is evidence that NEPs are effective in preventing Human Immunodeficiency Virus (HIV) infection without being associated with a rise in injecting drug use.

All of the routes for administering illicit drugs lead to increased risk of HIV, Hepatitis B (HBV) and Hepatitis C (HCV) transmission, when equipment is shared. While NEPs have been successful in reducing the risk of sharing needles, they tend not to impact on the sharing of other drug-use paraphernalia. Harm reduction programmes generally aim to minimise the sharing of all drug-taking paraphernalia as, for instance, non-injecting paraphernalia is also associated with increased risk of contracting diseases such as HIV and HCV. Harm reduction programmes appear to be less successful in containing HCV than in slowing the spread of HIV. There are examples of comprehensive NEPs significantly impacting on the rate of HCV infection, by placing greater emphasis on the factors involved in HCV transmission.

Spoons are the most frequently shared piece of injecting paraphernalia yet needle exchange programmes have been the focus of considerable research. Contaminated spoons, water or solvent and filters can all spread bacterial and viral infections. Irish services tend to focus on needle exchange in their harm reduction efforts with Intravenous Drug Users (IDUs). For instance, services do not exchange pipes for drug users who practise this method of administration. Strategies such as encouraging IDUs to utilise methods of administration other than injecting can assist in lowering risk of infection.

In addition to offering equipment exchange, a number of harm reduction programmes have included education of drug users with regard to risky drug use practices. Behavioural habits can be addressed in addition to education and support on specific techniques. For instance, drug users sometimes attach a lower risk to sharing equipment with partners and close contacts, and there seem to be implicit norms regarding borrowing and lending of administration equipment. Further work is required to devise best practice guidelines relevant to education and support, with consideration of staff development and education.

Specific risk factors for the sharing of drug-use equipment include youth, a shorter injecting history, confinement to prison, homelessness and being involved in a sexual relationship with another IDU. Work with young users requires particular engagement strategies, as younger drug injectors are less likely to heed the harm reduction message of safe injecting practices. Relevant harm reduction messages aimed at sexual partners of IDUs can heighten awareness of the risks associated with having unprotected sex with drug injectors who are sharing equipment.

The prison environment presents particular challenges for the implementation of harm reduction strategies, but a substantial body of evidence indicates the utility of expanding harm reduction efforts in prisons. Needle sharing in prison is the most important risk factor for the transmission of HIV, HCV and HBV among IDUs. Studies carried out in Ireland indicate increased prevalence rates of blood-borne

infections among drug injectors who have been in prison, than among injectors who have not been in prison. International research indicates that the introduction of relevant harm reduction programmes in prison, such as equipment exchange, can help reduce HIV and HCV transmission rates, without a subsequent increase in the rate of illicit drug consumption.

Supervised drug consumption rooms have been introduced in several countries. The aim of this harm reduction technique is to lower the incidence of blood-borne disease transmission and to support health needs generally, through increased access to primary health care and social services. These facilities can promote increased contact with services for the most marginalised IDUs, however, the evidence of their effectiveness is weak. The prescription of heroin has also been subject to trials at a number of international settings and outcome evaluations have not been able to show direct benefit. Currently, supervised drug consumption rooms and heroin provision are not part of the range of harm reduction measures available in Ireland. Legal restrictions in relation to the operation of supervised drug consumption rooms and heroin provision exist. The introduction of supervised drug consumption rooms would require changes in national legislation and careful consideration of the impact of such strategies in reference to international treaties.

Chapter 1
Introduction and Methodology

Background

There is a relatively high rate of opiate drug use in Ireland, generally estimated at 5.6 per thousand of the population (Kelly, Carvalho, & Teljeur, 2003). In a European context the highest estimates are reported for Italy, Luxembourg, Portugal and the United Kingdom, with between six and nine problem drug users per 1000 inhabitants of the 15-64 year old population. Estimates are lowest in Austria, Germany and the Netherlands with about three problem drug users per 1000 inhabitants aged 15-64 (European Monitoring Centre for Drugs and Drug Addiction 2002). These figures place Ireland in the middle band of the estimates for problem drug users in the population.

In September 2002, the NACD commissioned a review of national and international harm reduction research as part of its responsibility under Action 100 of the National Drugs Strategy "to conduct research into the effectiveness of new mechanisms to minimise the sharing of equipment e.g. non-re-usable syringes, mobile syringe-exchange facilities etc. to establish the potential application of new options within particular cohorts of the drug-using population i.e. amongst younger drug users, within prisons etc." (National Drug Strategy, 2001). The tender brief outlined a number of important areas in harm reduction that required consideration:

- An overview of drug-taking techniques and the paraphernalia used in the administration of illicit drugs
- A review of international approaches to harm reduction
- A review of national approaches to harm reduction
- A review of the uptake, effectiveness and limitations of harm reduction approaches nationally
- An international review of alternative and innovative initiatives which may have potential applications to Ireland
- A review of the issues involved in operating such schemes.

A deficit of published literature was anticipated in some of the core elements of the review, including the operation of harm reduction programmes nationally. These issues were addressed through an exploratory empirical study to obtain information directly from service providers.

Report Outline

This report presents a review of the research literature and the findings of preliminary research into the harm reduction practices of Irish drug services. The report is presented as eleven separate chapters outlined below. Chapter one, as well as describing the methodology employed, presents information on the NACD brief for this report. This is followed by a global review of harm reduction in chapters two to six. Material that specifically relates to Ireland has, where possible, been grouped in the latter chapters of the report. However the authors have been mindful to provide appropriate links between national and international research.

Chapter two outlines definitions of harm reduction in the context of approaches aimed at minimising the sharing of equipment used to administer drugs. This is followed by an exploration of the methods, tools and routes used in the administration of drugs in chapter 3. Chapter four is concerned with

NEPs as a harm reduction strategy. The range of sites from which NEPs operate, along with their effectiveness in the reduction of the transmission of blood-borne diseases is considered. In chapter five, drug consumption rooms and heroin provision are examined in reference to international experiences and trials of such services. Chapter six examines the effectiveness of harm reduction as a strategy in reducing the transmission of HIV, HCV and HBV.

Commencing with chapter 7, the report concentrates on harm reduction strategies in relation to Irish developments, and a review of national developments of harm reduction programmes. This is followed by a presentation of information from primary sources about the day-to-day work conducted in Irish harm reduction services. Chapter nine presents information on harm reduction in relation to marginalised groups such as women, travellers, prisoners and the homeless. Both the national and international research in relation to prisons is presented. The relevant Irish law and international treaties that govern the supply, preparation and consumption of controlled drugs are discussed in chapter ten which is followed, in chapter eleven, by a drawing together of the report's conclusions.

Search Strategy

The literature review for the study was based on a structured search of relevant research databases and other sources, the compilation of primary conceptual, methodological and empirical research, and an analysis of the research and integration of the findings. A series of search terms was used to find relevant research: harm reduction; harm reduction and service provision; harm reduction and risk factors; harm reduction/prisons; needle/syringe exchange; heroin; heroin provision; cocaine; drug use/misuse; drug addiction; injecting drug use; drug-taking paraphernalia; harm minimisation; and prevention. Researchers and workers in the area of addiction were contacted for information. The NACD research advisory group provided expert input to the design of the project. Search engines included CINAHL, PSYCLIT, Science Direct, the Cochrane Library, PubMed and Medline to ensure targeting of information from medicine, psychology, nursing and other relevant disciplines. The websites of relevant organisations were visited for information, including the NACD, the Government of Ireland, the World Health Organisation, the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), the INCB and the UN.

Selection Criteria

Reviewed material was restricted to the English language. Research published up until July 2003 was included in the literature review.

Data Collection and Analysis

Some of the search terms were broad; therefore each abstract in the strictly defined terms of the report, harm reduction approaches aimed at minimising sharing of equipment used to administer drugs, was reviewed. A general review of more broad terms was conducted to ensure the comprehensiveness of the research. Where an abstract was found to be relevant, the full article was sought and reviewed by a minimum of two of the authors of this report. In the case of annual reports or Government publications, the complete report was sought and reviewed for consideration of inclusion in this report. This resulted in the inclusion of almost 150 published articles and reports in the review.

Chapter 2
Harm Reduction

This chapter provides definitions of harm reduction in the context of approaches aimed at minimising sharing of equipment used to administer drugs. The problems in defining harm reduction are examined. The advantages of, and concerns about, harm reduction as a strategy to address the health risks associated with drug use are addressed. The international development of harm reduction programmes is considered.

Defining Harm Reduction

The World Health Organisation (WHO 2003) defines harm reduction as a concept aiming to prevent or reduce negative health consequences associated with certain behaviours. In relation to drug injecting, the 'harm reduction' components of comprehensive interventions aim to prevent transmission of HIV and other infections that occur through sharing of non-sterile injecting equipment and drug preparations (WHO 2003). Harm reduction focuses on minimising the personal and social harm associated with drug use and the spread of blood-borne diseases such as HIV, HCV and HBV (Hilton, Thompson et al., 2001). This public health approach enables the client to choose the safest way of using substances and provides necessary support and means in order to achieve the best possible outcome (Rassool, 1998).

Up until the 1980s, drug services around the world were mainly directed towards 'curing' addictions. The idea of harm reduction emerged following anxiety about the failure of treatments for drug misuse in the 1960s and 1970s and the recognition that drug dependency in many cases is a long-term problem for users and their families. Harm reduction has gained in popularity as a public health approach to drug addiction treatment since the 1980s when concern about the transmission of HIV emerged (Robertson, 1998). Worldwide there may be as many as two to three million past and current injecting drug users living with HIV/AIDS, and more than 110 countries now report HIV epidemics that are associated with injecting drug use (WHO 2003). Interventions for injecting drug users that reduce HIV risk also have the potential to engage drug users in treatment services that may ultimately lead to abstinence from drug use. Such programmes can help drug users avoid other harmful consequences of drug use, including HBV and HCV infections and deaths through overdose (WHO 2003).

A harm reduction approach focuses on reducing the harm that substance users cause to themselves and to their families. Within this approach, there is acceptance of ongoing intervention rather than short-term or abstinence-orientated approaches. A harm reduction approach aims to reduce the transmission of HIV, HCV, HBV and other infectious diseases and also helps to maximise service users' and their families' health. Hence harm reduction carries significant HIV prevention potential for both injecting drug users and the general population (WHO 2003).

Harm reduction programmes typically include a range of interventions, which, on a continuum, commences with communication with drug users and the general public and moves to the prescription of drug substitution treatment. Within the WHO (2003) definition any intervention that aims to prevent or reduce negative health consequences associated with the behaviour of drug misuse could be perceived as a harm reduction effort. However, it is important to distinguish between harm reduction, which aims to prevent or reduce negative health consequences, and treatment, which can be defined as a method

of counteracting a disease (Collins English Dictionary 1996). The blurring of boundaries between what constitutes harm reduction and what constitutes treatment is a cause of concern to those in the addiction field. This is clear from the outline of typical harm reduction interventions set out below:

Harm Reduction Interventions

- Information, education and communication on the health risks associated with drug use, which will assist drug misusers to avoid or modify their drug-taking behaviour;
- Health care in relation to infectious diseases associated with drug misuse which, as well as providing screening and interventions for specific infections, offers support, information and education;
- Needle exchange programmes, which aim to ensure that those who continue to use drugs have access to clean injecting paraphernalia as well as to provide safe disposal of used equipment. These programmes offer a range of equipment including needles, syringes, filters, cookers/spoons, sterile water, swabs and citric acid. Disinfection programmes – the use of bleaching agents – have been used in settings where needle exchange is not feasible (WHO 2003);
- Drug substitution treatment involves the medically-supervised treatment of individuals with opioid dependency based on the prescription of opioid agonists[1] such as methadone. While the primary goal of drug treatment is abstinence from illicit drug use, many patients are unable to achieve complete abstinence, despite improvements in their health and well-being. However, there is clear evidence that methadone maintenance (substitution treatment) significantly reduces unsafe injecting practices of those who are in treatment, and hence the risk of infection (WHO 2003). In the mid 1980s the aim of oral methadone prescribing in the Netherlands shifted from achieving abstinence towards achieving stabilization and harm reduction (Van Den Brink et al., 1999). Similar shifts have taken place elsewhere. However, it is important to distinguish between low-threshold maintenance programmes, which have a harm reduction aim, and high-threshold programmes, which are aimed at achieving abstinence (Office of National Drug Control Policy 2003).

Other less typical harm reduction interventions include initiatives such as drug consumption rooms that provide supervised facilities where drug misusers can consume drugs. These interventions are examined later in the report.

Problems in Defining Harm Reduction

Within the literature on harm reduction, there is continuing disagreement about the essential components of harm reduction and how it is operationalised as an approach. There is no agreement regarding the definition of harm reduction, and terms such as harm reduction, harm minimisation and risk minimisation are used interchangeably. For the purpose of this report the WHO (2003) definition will be utilised. Despite the ongoing debate about its components, harm reduction is a popular approach and has become widely adopted. Harm reduction is mainly associated with injecting drug

[1] An opiate agonist has similar effects to the injected opiate on the body thus removing the need to inject.

use (IDU) and the transmission of blood-borne infections. Harm reduction neither condones nor condemns drug use, but respects drug use as a choice (Hilton et al., 2001).

Advantages of Harm Reduction

There is an accumulation of international evidence about the importance, feasibility and effectiveness of different techniques for reducing drug-related harms. In the past, much of this evidence came from projects designed to reduce the risks of HIV transmission. Stimson (1998) states that harm reduction is not only a philosophical and practical approach to a drug problem but that it can also positively impact on the health status of IDUs. Overall, advocates for a harm reduction approach support their arguments with a rationale based on safer injecting practices, reduced rates of contracting infectious diseases and the curtailment of criminal activities.

Supporters of harm reduction argue that for drug users who can or will not discontinue drug use, the best possible outcome may be for continued drug use under supervised and safer conditions. In addition, Goldstein (2001) comments that access to reliable quality of drugs (instead of uncontrolled illicit ones) may help to improve longevity and health. Some promoters of harm reduction aim to undercut the black market and decrease criminal activities. HIV and AIDS have dramatically increased the adverse health consequences of IDU so that drug use has come to be seen as a health problem, as well as a criminal justice issue.

Concerns and Criticisms Related to Harm Reduction

The concerns voiced about harm reduction vary according to the perspective of the commentator, but are generally related to public health and safety, including the transmission of infectious diseases, the legislation governing illicit drugs and the crime rate associated with drug use.

Harm reduction requires an integrated approach including justice, education, drug treatment and other health programmes, in order to address the many problems associated with drug use (Des Jarlais, 1995). One of the most common criticisms of the harm reduction approach is that it is the first step towards legalisation of currently illegal drugs. According to Des Jarlais (1995), there are critical differences between a public health harm reduction perspective and one based on libertarian principles. Harm reduction remains controversial as it is perceived by some to give rise to accusations of collusion with drug taking instead of seeking solutions (Robertson, 1998).

Another issue of concern facing harm reduction is that it is difficult ethically to subject it to scientific scrutiny, for example, in the use of randomised controlled trials. Instead, case, longitudinal and cohort studies are used. These highlight the interaction between national and local policies, the interventions that are developed and how these interventions influence risk behaviours (Stimson, 1998). This is of particular importance in addressing the health care needs of marginalised groups within the general and drug-using population, including young people, prisoners and sex workers.

Differentiating between what constitutes harm reduction and what constitutes treatment is an issue that requires consideration. Negrete (2001) questions the influence that an ideological movement operating under the label of harm reduction appears to be exerting on treatment practices. This argument focuses on how a health education agenda has developed from a 'therapy' curriculum. One explanation is a lack of distinction between the objectives of public health campaigns and the purposes of individual treatment. Another explanation proposes a loss of concern among addiction treatment planners and clinicians for the problem of drug dependence itself (Negrete 2001). Methadone maintenance treatments have been shown to benefit drug users as well as providing public health and social benefits (Kreek 1992, Bell & Zador 2000, Negrete 2001). However, Negrete (2001) is concerned that the harm reduction movement readily embraces low threshold methadone maintenance and heroin prescribing.

Zador (2001) argues that injecting of prescribed opiates per se does not reduce the risk of blood-borne viral disease infection among injecting drug users – rather, reduced infection rates are predicated on the use of clean needles, syringes and other equipment to inject street heroin, prescribed medications or any other drug. It may be argued that injecting opiate treatment increases opportunities for reinforcement of these harm reduction strategies. Most recently, heroin prescription has been on trial in both Switzerland and the Netherlands. Heroin prescription is defined as a treatment. Studies on the medical prescription of narcotics to drug-dependent persons are defined as scientific studies designed to investigate the success of the proposed treatment as a step towards abstinence (Uchtenhagen et al., 1999). Treatment programmes may, and do, contain elements of harm reduction as steps towards abstinence. It is imperative that harm reduction programmes, which aim to prevent or reduce negative health consequences, are distinctly identifiable in both their aim and execution so as not to be perceived by those accessing or delivering them, or by the general public, as treatments for drug misuse.

International Development of Harm Reduction Programmes

Harm reduction is a popular approach in public health and medical practice (Robertson, 1998). The World Health Organisation (WHO) recognises that the spread of HIV is a greater danger to individual and public health in comparison to drug misuse and requested that measures to reduce drug use do not compromise efforts to curtail the spread of HIV (Riley, 1993). Many countries and organisations have adopted harm reduction programmes (Hilton et al., 2001).

The harm reduction perspective was first developed in industrialised countries, with important work originating in the Netherlands, UK and Australia. Social and medical services for the management of IDUs vary internationally according to social, economic and medical perspectives and traditions.

From 1981, absolute abstinence was abandoned as the primary goal of all drug-misuse treatment efforts in Amsterdam. Instead, the Dutch Drug Policy focused on harm reduction interventions. In the same year this led to the introduction of low threshold methadone programmes. These were defined

as being harm reduction oriented with the aim of relieving withdrawal symptoms and craving while improving patients' quality of life. Needle exchange was introduced in Amsterdam in 1984 and is further explored in Chapter 4.

Italian drug users could buy injecting equipment in the 1980s and NEPs were established in the UK shortly afterwards. In Liverpool, the Merseyside project co-ordinated clinics, pharmacists and the police force to establish a unique harm reduction model that prescribed drugs, provided needle exchanges and supported drug users (Riley, 1993).

In Australia in the 1980s, harm reduction programmes such as NEPs and safer sex education developed in response to the risk of HIV (Wellbourne-Wood, 1999). Since 1995, harm reduction is the guiding principle of Australia's National Drug Policy.

In 1987, the Canadian Government officially adopted harm reduction as the framework for Canada's National Drug Strategy defining harm in terms of sickness, death, social misery, crime, violence and economic costs to all levels of Government (Riley, 1993). Canada's first NEP opened in Vancouver in 1989 (Riley, 1993).

Although a harm reduction approach was adopted with some enthusiasm in Europe and Australia, acceptance has been slower in the United States. This may have been due to an abstinence-oriented establishment and long history of tightly-controlled methadone provision (Robertson, 1998).

Harm reduction is spreading to many developing countries with NEPs operating in Nepal, Thailand and India. There is an Asian Harm Reduction Network which aims to support individuals and organisations interested in implementing harm reduction efforts throughout Asia (Robertson, 1998).

Key Points

- Harm Reduction focuses on minimising the health, personal and social harms associated with drug-use such as the spread of blood-borne diseases
- Harm Reduction involves ongoing interventions for the IDUs
- Where comprehensive Harm Reduction programmes exist, lower rates of HIV infection are reported
- Clear distinction needs to be made between Harm Reduction programmes and drug misuse treatments
- Harm Reduction programmes, as a strategy to improve the health of IDUs, their families and the general public, have grown internationally

Chapter 3
Methods and Tools of Drug Administration

In this chapter the reader is presented with a review of the varied routes and modes of drug administration. This includes discussion on the paraphernalia required in the preparation of drugs for administration. Sharing drug-taking paraphernalia is considered in relation to the factors that influence this behaviour and its implications for the drug user.

Drug Taking Techniques

The route and mode of drug administration vary for a number of reasons. These include the type of drug, the desire and concerns of the user, the availability of equipment and circumstances in the particular environment of the user. This report is primarily concerned with the risks associated with sharing equipment in drug users. The most-commonly-used drugs that require equipment for administration by users are heroin and cocaine.

The opiate heroin can be taken by a variety of routes such as by smoking, skin-popping (which is defined as injecting drugs under the skin and/or injecting drugs on any part of the body without hitting a vein), or it can be taken intravenously (Office of National Drug Control Policy 2003).

Cocaine, a stimulant, is most commonly snorted or injected. Injecting cocaine requires frequent administration. This implies that more paraphernalia is required by the drug misuser in order to avoid the harm of sharing. Inhalation of crack cocaine with the aid of a pipe is a recent and popular administration route. All of the routes that require the use of equipment increase the risk of the transmission of HIV, HBV and HCV when equipment is shared.

Sharing of injecting equipment can include the sharing of needles and syringes, the sharing of other equipment used in preparation for injection such as spoons, cotton and water containers and the sharing of drugs by transferring some of the contents from one syringe to another, commonly known as front- or back-loading (Speed, 1998). Sharing or 'borrowing' involves using equipment received from another injector (Gossop, Griffiths, Powis et al., 1997). In donor sharing or 'lending', the injector passes used injecting equipment to another person. Injectors often regard 'sharing' as referring only to injecting with a syringe taken from another person but not referring to the act of passing a used syringe to others (Koester, Booth & Zhang, 1990). Gossop et al. (1997) found that donor sharing of syringes (lending used equipment) was more commonly reported than recipient sharing of syringes (borrowing used equipment from others).

Preparing drugs frequently involves the use of a spoon or 'cooker' and a water container to flush syringes before use and/or from which water is drawn to dissolve materials for injection. Sharing accessories such as spoons, cotton, water, filters or front- and back-loading also known as 'halving' is often not perceived as sharing by drug users (Gossop et al., 1997).

Sharing Injecting Paraphernalia

In addition to syringe borrowing, there are other important unsafe injecting practices, which may contribute to the spread of blood-borne viral infection such as HCV (Gossop et al., 1997). In his study of shared use among 303 London heroin addicts, Gossop et al. (1997) investigated the extent to which drug injectors passed syringes, spoons and water containers to be used by another person. They also examined the sharing of equipment by the user after these had been previously used by another IDU and the frequency with which such practices occurred with sexual partners, close friends and casual acquaintances.

In their study of IDUs, the majority of whom were male, a structured interview was administered and saliva samples were taken from the majority of the sample. The predominant pattern of drug taking was polydrug use. Multivariate analysis results indicated that respondents were more likely to report sharing water containers or spoons than syringes. This effect was more evident amongst close friends than amongst casual acquaintances and sexual partners. However, more than half of those who had a sexual partner who was also an IDU reported only sharing spoons and water with them. Overall, Gossop et al. (1997) concluded that nearly two thirds of the sample had engaged in some sort of sharing practice with injecting equipment during the previous year.

In a cross-sectional study of 97 regular attenders at five NEPs in the North West of England (89% who used heroin, 5% who used cocaine), Speed (1998) reported that there is extensive sharing of injecting paraphernalia among this group. The average age of participants was 30 years with an average of 8 years' drug use (average length of injecting was 5 years). The information was collected using a highly- structured interview schedule administered by one interviewer. According to Speed (1998), the most frequently-shared piece of injecting paraphernalia was the spoon. More than two thirds of the sample indicated that they use spoons at the same time as someone else, with almost 80% doing this on more than one-in-two injecting episodes and with multiple associates over the last four weeks. Over a third of the sample indicated that they had used the spoons after someone else with over a half reporting that they had lent spoons to others. Nearly two thirds of this group lent them to multiple users including casual acquaintances.

Nearly two thirds of the sample (Speed, 1998) reported that they had used a pot of water at the same time as someone else, mostly with multiple partners, including casual acquaintances. In contrast, less than 10% of the IDUs reported using a syringe and needle after another person. Of these eight, seven participants washed the syringe and needle before they used it. A total of 24% reported allowing others to borrow a used syringe after them. This study suggests that NEPs are successful in reducing the risk of sharing needles and syringes, but have not made a significant impact on the sharing of other injecting paraphernalia.

A pilot study by Gaskin, Brazil & Pickering (2000) highlights the value of providing sterile water and filters to IDUs to meet their basic and important needs. This study examined 40 IDUs at four Worcestershire Community Drug Team Centres. The majority of participants were male with a mean age of 30 years. The majority of participants injected heroin.

The study was interested in ascertaining the behaviours and tendencies towards sharing of injecting paraphernalia within this group. All participants were administered a questionnaire with 90% reporting some form of sharing with either a filter and/or water. Only 10% stated that they had never shared at all. In contrast with other studies, Gaskin et al. (2000) did not differentiate between the person with whom they were sharing.

According to Gaskin et al. (2000), environmental factors such as the communal use of water and filters in drug users' settings can be clearly identified as potential sources of infection. Despite attending NEPs, the majority of respondents engaged in risky sharing behaviour of injecting paraphernalia including water and filters. Although users were aware of the risks associated with sharing equipment, including HIV, HCV and HBV, they continued to engage in risky behaviours. This finding suggests that within NEPs, it is necessary to target both changing behaviours and perceptions around risk. Gaskin et al. (2000) recommend that services should provide sterile water and filters to IDUs, as well as promoting information about the shared use of paraphernalia. Providing both the equipment and the education is an essential aspect of harm reduction strategies.

Factors that Influence Sharing of Drug-Taking Paraphernalia

Internationally, the most frequent characteristics associated with syringe borrowing include youth (e.g. Cassin, Geoghegan & Cox, 1998; Saxon, Calsyn & Jackson, 1994), shorter injecting history (e.g. Stark, Muller, Wirth et al., 1995) and being in a sexual relationship with another IDU (e.g. Saxon et al., 1994; Gossop et al., 1997).

Key Points

- All drug-taking routes that require the use of equipment increase the risk of the transmission of HIV, HBV and HCV
- Harm reduction messages around sharing should include discussion about both 'borrowing and lending'
- Bacterial and viral infections may be spread by contaminated spoons, water or solvent and filters
- Characteristics most frequently associated with the sharing of equipment include youth, a shorter injecting history and being involved in a sexual relationship with another IDU
- NEPs have been successful in reducing the risk of sharing needles and syringes, but have not made a significant impact on the sharing of other injecting paraphernalia
- Within NEPs it is necessary to target both changing behaviours and perceptions around risk

Chapter 4
Needle Exchange Programmes

Much of the activity of harm reduction takes place in the context of NEPs. This chapter is concerned with NEPs as a harm reduction strategy. The range of settings where NEPs operate is reviewed.

Definition

In the research literature, the terms NEPs and SEPs are used interchangeably to describe a form of harm reduction mainly concerned with risks to IDUs associated with sharing equipment. These programmes operate on a 'knowledge and means' model of behaviour change. It is assumed that in order to change behaviour, people need to know why such changes are necessary and importantly, need to be provided with a means to changes in their lives (Homans & Aggleton, 1988).

Injectors frequently report sharing needles and syringes because of difficulties in accessing this equipment. This is particularly the case where laws prohibit possession of equipment, or conditions where needles and syringes are unavailable such as late at night or while in prison (Riley, 1993). As IDUs are at risk of infection due to choices such as sharing injection paraphernalia, access to sterile paraphernalia is vitally important for reducing the risk of disease transmission (Rich, Macalino, McKenzie et al., 2001).

International Needle Exchange Programmes

In the summer of 1984, the Amsterdam Junkiebond, a drug users' advocacy group, began exchanging needles and syringes with the support of the Municipal Health Service. Despite having the opportunity to buy needles and syringes in pharmacies, Junkiebond became concerned that a decision by a pharmacist not to sell needles and syringes to drug addicts would result in an outbreak of HBV. The Municipal Health Service delivered needles and syringes in large quantities to Junkiebond once a week. Two years later, the Municipal Health Service introduced the exchange of needles and syringes on methadone buses. Between 1985 and 1988, the number of exchanged needles and syringes rose from 100,000 to 720,000 (Buning, 1991). This increase paralleled a changing awareness of the risk of acquiring HIV through sharing paraphernalia (Marlatt, 1996).

The first syringe exchange in the UK opened in 1986 in the Mersey Region Drug Training and Information Centre. The original location was a toilet cubicle. A review by Stimson (1998) estimated that there were about 450 NEPs and pharmacy exchanges in the UK with a total of 2,000 outlets. In addition, syringes and needles are sold through pharmacies. In London, about 75% of injectors obtain their equipment from NEPs and pharmacy exchange schemes. Anderson et al. (2003) report on the contribution that community pharmacies have made to needle exchange programmes. According to their report the number of pharmacies providing needle exchange services increased from 3.0% in 1988 to 18.9% in 1995 along with an increase in the sale of injecting equipment to 34.5% from a previous recorded figure of 28% in 1988. A number of factors are associated with community pharmacy participation in these services, (male gender; more recent registration; and a positive attitude towards drug misuse). Their findings conclude that pharmacy-based needle exchange schemes are cost effective and that specific training needs of pharmacists participating in these schemes have been identified.

The success of pharmacy-based needle exchange in Great Britain can be associated with how these services are standardised and audited by the Royal Pharmaceutical Society of Great Britain. The Society's functions include regular inspection of pharmacies to monitor standards of practice and compliance with legal and professional requirements (Flint, 2001). Sheridan et al. (1996) reviewed the role of community pharmacies in relation to HIV prevention and drug misuse. The authors found a substantial increase in the overall contribution of community pharmacies to the provision of services to drug misusers. This included the emergence of pharmacies with more specialised involvement with drug misusers, including an extensive network of points of contact for drug misusers, not all of whom will take part in formal treatment programmes.

In Switzerland, syringes and needles have been available through contact centres, vending machines and outreach workers since the 1980s. A consequence of this has been a recorded decrease in HIV transmission amongst IDUs. The Swiss Federal Office of Public Health (1999) acknowledges that efforts to control the spread of hepatitis are required. Understanding the risks associated with sharing injecting paraphernalia and implementing appropriate measures to minimise the risks may assist in addressing this problem.

While government-funded NEPs are well established in several countries, there has been strong opposition to this in the US. Federal funding has been prohibited until the Surgeon General determines whether NEPs would be effective in preventing the spread of HIV and would not promote the use of illegal drugs. State legislation relating to prescription and paraphernalia laws restricting possession and distribution of needles and syringes hinder the operation of NEPs.

By 1994, 55 US cities had established NEPs, many operating illegally on a small scale and with minimal funding (Hurley & Jolley, 1997). A key aim of NEPs, to prevent the spread of blood-borne infections, has been promoted through the reduction of the incidence of HIV by approximately 70% in New York City (Des Jarlais & Michael, 1996).

Canada's first official NEP opened in Vancouver in 1989. Over 100 Government-sanctioned exchanges have opened in Canada (Conley, Hewitt, Mitic, et al., 1998). In Canada, NEPs operate from fixed sites, mobile exchange vans that provide needle exchange throughout the night, and pharmacies (Wood, Tyndall, Spittal et al., 2002; Conley et al., 1998). IDUs are informed about the locations of NEPs through flyers and adverts at the fixed sites, at other IDU services and through word of mouth.

In Australia, the first pilot and illegal NEP were established in 1986. A year later, a government-funded NEP was established in New South Wales (Loxley, 2000). In line with other countries, injecting paraphernalia can be obtained from both NEPs and pharmacies. Few NEPs insist on one-to-one exchange. Exchange can be facilitated by providing free equipment for used equipment and charging at a cost-recovery rate for non-exchanged equipment (Loxley, 2000).

NEPs operate in Australia from fixed sites, dispensing machines and through the 'Fitpack' programme. This programme operates through community pharmacies in Western Australia. It does not include an exchange component but provides needles and syringes with a safe disposal container (Lenton et al., 2000). Five needles and syringes were sold in each Fitpack. These hard plastic containers are designed to enable used syringes to be 'locked-in' for disposal so that they cannot be reused or cause harm to others.

Harm reduction, as well as providing the drug misuser with sterile drug-taking paraphernalia through NEPs, places emphasis on communicating with the individual and engaging them in health care services and much of this activity takes place through NEPs. Services aim to be effective in the reduction of the transmission of HIV, HBV and HCV. The literature reveals that NEPs combine the exchange of paraphernalia and the delivery of information, providing essential communication with the drug misuser. However, pragmatic approaches to NEPs recognise that personal contact is not always feasible, and in these incidents, services have been augmented with NEPs through vending machines.

Key Points

- NEPs are established internationally as a key component of harm reduction strategies, which provide clean paraphernalia, advice and education to drug misusers
- NEPs operate from a range of fixed sites, mobile units and vending machines
- Pharmacy-based NEPs are cost effective and provide an extensive network of contacts for drug misusers, not all of whom take part in formal programmes
- NEPs have been positively associated with a decrease in the transmission of HIV

Chapter 5
Service-Supervised Drug-Consumption Rooms and Heroin Provision

International developments in harm reduction services have in some countries included the provision of supervised drug-consumption rooms. Limited trials providing heroin to users have been conducted. In this chapter the introduction of consumption rooms for drug misusers is considered. Heroin provision is discussed. Harm reduction interventions and treatment measures that extend to the provision of environments where drug misuse is facilitated and where scheduled drugs are part of trials or provided as treatment have both national and international legal implications. These legal implications are addressed in chapter 10. The provision of naloxone as a harm reduction strategy is also discussed.

Within the literature a number of terms are used, some times interchangeably, to describe facilities where drug users congregate to take drugs. These terms include drug-consumption rooms, safe-injecting facilities, safe-injecting rooms and medically-supervised injecting centres (EMCDDA 2002a, Nadelmann et al., 1999, Mattick et al., 2001). Consumption room normally refers to supervised safe drug-taking facilities for the administration of drugs, which are provided by statutory or state-recognised, agencies. Supervision is provided by trained staff operating as part of a multidisciplinary team. Consumption rooms aim to reduce harm both for the drug user and the wider community (Hunt et al., 2003). A number of benefits to the drug user are suggested including the prevention of HIV, HBV and HCV, facilitation of access to treatment, the provision of social support and reintegration, along with reductions in overdose and venous damage. The community at large may also benefit from reduction in drug related litter of needles and syringes and public injecting.

Distinctions need to be made between service-supervised consumption rooms and shooting galleries. The term shooting gallery normally refers to an unsupervised place where drug users congregate to take drugs. Consequently, they do not always adhere to best practice in relation to harm reduction.

Service-Supervised Consumption Rooms

Safe injection facilities are part of the harm reduction approach in the Netherlands (Mol & Trautman, 1991), Switzerland (Klingemann, 1996), Germany (de Jong & Weber, 1999) and Spain (Kimber et al., 2002). A study by Kimber et al. (2002) identifies 39 supervised injecting centres in the Netherlands, Switzerland, Germany and Spain. A similar facility has been established in Australia on a trial basis (Dolan, Kimber, Fry et al., 2000). The Sydney trial is one of only 59 equivalent drug consumption centres operating in 33 cities in Germany, Switzerland, the Netherlands and Spain (Burton 2003). Two further European countries, Portugal and Luxembourg, are planning similar facilities. The EMCDDA annual report (2002b) shows that Norway and Denmark considered and decided against the introduction of supervised consumption rooms.

The goals associated with the introduction of safe injection facilities depend on the setting in which they have been introduced. Goals include the reduction of the incidence of infectious disease transmission, to improve the general health of IDUs and to increase their use of appropriate primary health care and social services (Kerr & Palepu, 2001).

Safe injecting facilities achieve the goals of harm reduction by supervising injections in a controlled setting, ensuring safety and quick responses to overdoses, providing sterile injecting equipment and condoms, collecting used needles and syringes and providing counselling and primary health care (Kerr & Palepu, 2001). Safe injecting facilities are a means of increasing contact with the most marginalised IDUs (Mol & Trautman, 1991). Safe injecting facilities use a humanitarian approach and function on a background of medical ethics (reducing mortality, reducing morbidity, alleviating the suffering, trying not to damage the patient by the measures taken) (Haemmig 2003).

Hagen (2002) describes the challenges in estimating the contribution of supervised injecting rooms to harm reduction for drug users. Safe injecting rooms represent a relatively small segment of public health activities in communities where they exist, and the proportion of users who participate in safe injecting rooms may be smaller than the proportion utilising needle exchange or drug treatment. This limits the possibility of finding a community-level effect of the programme, and relatively large samples of drug users would be needed to detect any association between the use of safe injecting rooms and reduction in overdose or transmission of blood-borne viruses (Hagen 2002). "The attempt to show the benefit of safe injecting facilities by scientific research is a difficult task… it is impossible to create a potential control group, because drug users are mostly a hidden population" (Haemmig 2003).

Consumption Rooms and Relevant Policy

De Jong & Weber (1999) refer to 'consumption' rooms rather than injection rooms as drugs may be inhaled, consumed orally or injected. In the Netherlands, the city administration is legally responsible for policies on health promotion and public order enforcement. Local government carries the responsibility for the development, functioning and financing of drug consumption rooms. They are known as 'facilities to be tolerated'. In Germany and Switzerland, it is also local government that takes responsibility to develop policy in this field. There is an identifiable conflict between law reform and public health issues. The Netherlands policy of 'facilities to be tolerated' should not be misinterpreted as legislation that legalises the consumption of drugs but as a pragmatic approach to harm reduction.

Hunt et al. (2003) state that the organisation of consumption rooms and the emphasis within their objectives varies according to the setting in which they are provided. For example the medically-supervised centre in Sydney Australia was introduced against a context of high levels of heroin overdose. The centre, based in the inner city district of Kings Cross, opened on a trial basis following the passing of appropriate legislation by the state government of New South Wales. Yamy (2000) stated that the International Narcotics Control Board accused the state of New South Wales of violating international treaties on narcotics. A spokesman for the board said: "Any nation state or local authority that permits the establishment and operation of such drug injecting rooms also facilitates illicit drug trafficking" (Yamy, 2000). In the Netherlands where rates of injecting and overdose are comparatively low, there is greater emphasis on reducing the nuisance from street drug use and providing social support within a more informal setting (Hunt et al., 2003).

The role that drug consumption rooms play in the prevention of death following heroin overdose has been given much consideration. Research on the association between supervised injecting rooms and drug overdose is encouraging but not definitive (Hagen, 2002). Burton (2003) reports that in the period May 2001 to October 2002, 3810 registered individuals made 56,861 visits to Australia's first medically-supervised injecting centre. A total of 409 incidents of drug overdose were recorded, though none were fatal. No overdose deaths have occurred among hundreds of thousands of Swiss and German supervised injectors (Sporer, 2003).

However positive this management of overdose appears, there are other points to consider about the impact of supervised consumption rooms on injecting drug users. Christian (2003), reporting on Australia's medically-supervised injecting centre, highlights that clients average a maximum of 7 injections at the centre out of every 100 and that only 4.1% of overdoses in Australia are fatal. Byrne (2003), who supports the centre, is not surprised that drug misusers continue to inject elsewhere as the centre is only open for 8 to 12 hours daily. Other harm reduction targets are also examined by Christian (2003) in relation to the introduction of the centre. No improvement was recorded in ambulance overdose attendance in the area outside or during the hours the centre was open. No statistical improvements were recorded in HIV and HBV infections. Despite the presence of the injecting room, HCV was worse by 11% per year in line with the HCV epidemic trend Australia wide. Regarding new needle and syringe use – the injecting room displayed no advantage over the nearby needle exchange and no improvement in the reusing of someone else's syringe (Christian, 2003).

The recent 'heroin epidemic' has led to a dramatic increase in the incidence of fatal and non-fatal overdose in many countries (Sporer 2003). Death from opiate overdose increased 55-fold in Australia between 1964 and 1997 and heroin overdose was the leading cause of death among men aged 25-54 in Portland, Oregon in 1999. Every year 2% of people who inject heroin die, which is 6-20 times the rate expected in peer controls of those who do not use drugs (Sporer 2003). Most of these deaths occur in the company of other people and medical help is not sought until it is too late.

Naloxone Provision

Another strategy employed to prevent or minimise the risk associated with heroin overdose is making naloxone available to drug users. Naloxone is a specific opiate antagonist[2] with no agonist properties and no euphoriant potential. It has shown to be very effective in treating acute overdose. Naloxone has been sold over the counter in Italy for more than 10 years and has been distributed through NEPs since 1995 (Simini, 1998). Home naloxone programmes have commenced in Germany and England, New Mexico recently adopted legislation allowing the distribution of home naloxone as well as expanding the categories of public safety personnel allowed to use it and the Chicago recovery alliance have provided 550 drug users with naloxone (Sporer, 2003). Sporer (2003) highlights that distributing naloxone could be interpreted as condoning heroin use, as well as making it seem safer to use heroin in even larger dosages.

[2] Antagonist – completely reverses the effect of opiates.

Provision of Safe Injecting Environments

In a prospective cohort study of 1400 IDUs in Vancouver, Wood, Tyndall, Spittal et al. (2001), analysed data on 776 participants who reported injecting drugs during the 6 months prior to follow up. Of this group, despite a large NEP in Vancouver, 28% of the IDUs reported sharing needles. Pharmacy refusal to provide sterile needles and requiring help in injecting were positively associated with sharing needles. Univariate analysis of drug use and behavioural characteristics indicated other factors that were positively associated with needle sharing. These included difficulty getting sterile needles and frequency of injections. A total of 19% of the sample reported sharing needles despite having easy access to them. This finding suggests that the expansion of the NEPs on its own is not sufficient to eliminate the risks associated with sharing equipment (Wood et al., 2001). Being older and HIV positive was inversely associated with needle sharing. Wood et al. (2001) emphasise that HIV testing and counselling, health and social functioning, and drug addiction treatment have occurred among clients of safer injecting rooms where they exist. A converse incidence of HIV risk behaviour, including reduced needle sharing and hospital admission, improved needle disposal, a decrease of drug injecting in public places and a reduction in death from overdose, has resulted.

In several European cities, the risk factors identified by Wood et al. (2001) have been addressed through the establishment of safer injecting rooms as part of comprehensive harm reduction strategies (Dolan et al., 2000). Smyth et al. (2001) identified that syringe borrowing persists amongst IDUs in Dublin despite the existence of harm reduction programmes and recommends that interventions should include exploring the unique attitudes and beliefs regarding unsafe injecting with each individual. Supervised consumption rooms may provide another point of access to services for marginalised Irish IDUs. The findings of Dolan et al. (2000), Smyth et al. (2001) and Wood et al. (2001), all suggest that NEPs on their own are not sufficient to eliminate the risks associated with sharing drug-taking paraphernalia.

Heroin Provision

Pharmaceutical heroin (diamorphine) provision has been considered and trialed as a treatment approach to IDUs. The arguments for such an approach include, attracting people who might not be inclined otherwise into treatment, reducing illicit drug use, undercutting the black market and protecting the physical health and social functioning of the IDUs. Counter arguments include that it maintains the IDUs in their current position of drug use and may postpone by years eventual abstinence from heroin. It may increase the number of IDUs continuing to inject. It could be considered contrary to harm reduction principles in that prescribing injectable opiates might be associated with an increased incidence of deep venous thrombosis as a consequence of injecting into the femoral veins following loss of venous access in the arms (Zador, 2001). It is more costly than the provision of oral substitution drugs such as methadone. In the UK, heroin has been used to treat addicts since the 1920s (Hunt et al., 2003). Despite the concerns about such an approach proposals for heroin trials in Australia and more recently Denmark, Luxembourg and the Netherlands have followed from perceived successes elsewhere. Hunt et al. (2003) reports that the proposed Australian trial did not commence, as their government did not sanction it. Similarly Germany, France, Belgium, Spain and Canada are planning or currently taking part in trials of heroin prescription (Hunt et al., 2003).

The UK differs from most other countries by including injectable heroin and methadone in its range of opiate substitution therapies for heroin-dependent users (Zador, 2001). A small number of licensed medical practitioners can prescribe heroin to any drug-dependent user following assessment of their suitability for this intervention. Heroin provision became part of practice in the United Kingdom in 1926 following the Rolleston report. In the 1970s oral methadone became the predominant form of opiate maintenance treatment. This shift was in response to data emerging from the United States and the result of local research (Zador, 2001). Currently, the option of injecting opiate treatment is infrequently exercised – less than 1.7% of all prescriptions for treatment of opiate dependence are for heroin, while injectable methadone accounts for about another 9%.

The few studies that have evaluated heroin maintenance in the UK reported reduced levels of crime among heroin-maintenance patients as measured by self-reporting (Zador, 2001). Hall (1999) suggests that for heroin maintenance to have an impact on the negative social consequences of dependent heroin use such as crime, would require, among other conditions, a substantial scaling up in provision of this treatment. McClusker & Davies (1996) in their study on prescribing the drug of choice to illicit heroin users found that those who remained in oral methadone treatment showed a reduction in prescribed opiate use and more were aiming at abstinence as a goal compared with the group receiving prescribed heroin. In their 1977 study, Thorley, Oppenheimer & Stimson found that at a 6-year follow-up of 128 patients prescribed heroin, only 23% had remained continuously in treatment over this time period. More data are needed on long-term outcomes of both injectable heroin and methadone to assess whether patients are more likely to remain in injecting opiate treatment than transfer to oral methadone treatment and/or become abstinent (Zador, 2001). The British model of injecting opiate treatment is unique and has attracted much attention. Reference is made to it in both the Swiss and Dutch trials. Britain's paucity of evaluation of this intervention is all the more mystifying given its controversial status (Zador, 2001).

In 1992 in Switzerland, an evaluation of heroin, methadone and morphine prescribing involving 1035 users was conducted (Uchtenhagen et al., 1999). A total of 17 outpatient treatment centres and one prison were involved in this project. Strict admission criteria to the project were outlined. Users were receiving 500 to 600 mg of heroin daily. The injections of the prescribed drugs had to be given under strict supervision and these could not be taken home. Heroin was prescribed as part of a comprehensive social and psychological intervention.

During the study, 11 people who previously tested negative, tested positive for HIV (N=3), HBV (N=4) and HCV (N=5)*. The researchers concluded that this could be related to cocaine injecting outside the programme. Illicit heroin and cocaine use rapidly and significantly decreased, benzodiazepine use decreased slowly and alcohol and cannabis consumption hardly reduced. Income from illegal activities decreased dramatically. By the end of the project, 8% decided to give up heroin and sought abstinence therapy.

* N = Number

The heroin provision in prison required operational changes within the system as well as changes in staffs' attitudes. Positive outcomes were identified overall and it was noted that good collaboration with outpatient treatment centres could be established for follow-up treatment of discharged inmates.

Uchtenhagen et al. (1999) concluded that heroin-assisted treatment can be carried out safely and that significant health and lifestyle improvements can be obtained and maintained post treatment. Retention in treatment was 89% at six months and 69% at 18 months (Uchtenhagen et al., 1999). They state that the economic benefit of such programmes is considerable particularly in relation to a reduction in costs of criminal procedures and disease treatment. The cost of this trial needs to be considered.

At the request of the Swiss Government and the International Narcotics Control Board (INCB) the WHO co-ordinated an evaluation of the Swiss heroin prescribing project (Uchtenhagen et al., 1999). A three-stage evaluation was conducted examining the study protocol, the implementation of the project and a review of the scientific report. Ali et al. (1998) reported that the prescription of injectable heroin is feasible, clients can be maintained on a stable dose of heroin, heroin treatment programmes can be delivered at treatment centres providing methadone maintenance with some modifications, the programme achieved reasonable retention levels and individuals self-reported improvements in their physical and mental health, social function, drug use and criminal behaviour.

However Ali et al. (1998) also reported that the Swiss study was not able to examine whether improvements in health status or social function was causally related to heroin prescription per se or as a result of the impact of the overall treatment programme. From a rigorous methodological viewpoint, it is not possible to obtain internally-valid results with respect of the research question of heroin prescribing being causally responsible for improvements in health status or social function of the individuals treated (Ali et al., 1998). The study has not provided convincing evidence that, even for persistent methadone failures, the medical prescription of heroin generally leads to better outcomes than further methadone treatment. The knowledge base is not large enough to determine cost effectiveness and the differential indications for heroin substitution treatment.

There are many limitations to this trial including the absence of a comparison group and the social, cultural and political context within which this programme was introduced. These need to be considered in any replication of this trial. Switzerland have now authorised the prescription of heroin for opiate dependence (Hunt et al., 2003). The scale of the Swiss trial needs to be considered. The treatment described has only assisted about 3% of Swiss heroin addicts in the long term (Copeman, 2002). However, a wider programme would inherently be more difficult to monitor – to see that addicts actually receive the treatment – and it might send entirely different signals to new or prospective addicts, who could well see prescription heroin as an easy option to take up (Copeman, 2002).
It is important to acknowledge that these recent Swiss studies made no attempt to investigate the long-term effects of the prescription of heroin alone, i.e. without obligatory counselling and other psychosocial interventions. Thus they do not provide information about the effect of the prescription of heroin per se, but rather about the effects of a combined package of pharmacological (heroin) and psychosocial interventions (Van Den Brink et al., 1999). Wodak (1998) comments on the difficulties of

disentangling the contribution of comprehensive social and psychological interventions in the impressive results obtained in the Swiss trial. After more than three decades of research evaluating the effectiveness of methadone maintenance treatment, it is safe to conclude that such an intervention improves outcomes but it is difficult to be much more precise than this. Social and psychological interventions probably improve results of virtually all interactions between patients and the healthcare system (Wodak, 1998).

Sendi et al. (2003) report on intravenous opiate maintenance in a cohort of injecting drug addicts in Switzerland. They are especially concerned with injecting drug addicts who have repeatedly failed withdrawal or substitution treatments on the basis that this group of patients according to Belding (1998) consume more cocaine and heroin and are often not willing to quit substance abuse. The opiate maintenance programme was started as a prospective cohort of patients who were treated intravenously with heroin, morphine or methadone. An important aim of this programme is to keep the patients as long as possible under medical supervision in order to reduce the health hazards associated with illicit drug consumption (Rehm et al., 2001). Patients were included in the program when the following conditions were met: a history of intravenous heroin consumption of at least 2 years; previous failed withdrawal treatments; health problems associated with drug consumption; and an age of at least 20 years (Sendi et al., 2003). A total of 175 patients were included in the study. The majority of patients were 21-years old. There were a total of 76 treatment withdrawals. The three-year probability of remaining in the study was 61.7% (Sendi et al., 2003).

There were 134 HIV negative patients at the start of the study and only one seroconversion was observed during the study period. The first patient entered the programme in 1994 and the last patient in 1996. Patients were followed up until autumn 1998. There were 37 HBV negative patients at study entry and six seroconversions during the study. There were 30 HCV negative patients at study entry and seven patients seroconverted during the study period. HIV, HBV and HCV were not associated with time-to-treatment withdrawal. The longer than usual follow-up period in this study is important. One of the objectives of prescribing injectable heroin is to reduce criminal behaviour associated with illicit drug use. However 14% of treatment withdrawals (6% of the study population) were due to violence or threat. The risk of treatment withdrawal was independently associated with age and duration of injecting use (Sendi et al., 2003). No control group was used, and the authors did not control for psychosocial factors such as marital status, poverty and homelessness. The authors found that individuals with a longer injecting history, and of a younger age, were more likely to withdraw from the programme.

Heroin can be prescribed in the Netherlands for research purposes. An experiment involving the prescription of heroin under strict medical supervision began in the Netherlands in 1998. It involves a group of 750 users who it was considered could no longer be helped by the regular care system. The outcomes are being compared to a treatment group with methadone and a treatment group with a combination of heroin and methadone. The aim of the study is to examine whether the prescription of heroin has a beneficial effect on the physical and mental health and on social functioning of the user (cited in NDS 2001).

Van Den Brink (2003) reports on two randomised controlled trials of the medical prescription of heroin to treatment-resistant heroin addicts. 549 participants took part in two separate, open label, multi-centre, randomised controlled trials and five treatment groups; three in the inhaling trial and two in the injecting trial. At the end of 12 months, participants in the control groups were offered six months of medically-prescribed methadone plus heroin. In all cases the medically-prescribed heroin was discontinued for at least two months after the end of the experimental period. All patients had full access to standard medical and psychological services. Twelve-month follow-up data was available for 93-94% of the randomised participants. Completion rates were high in all treatment groups, but somewhat higher in the group allocated methadone alone than in the group allocated to heroin plus methadone. The experimental treatment with 12 months of methadone plus heroin was significantly more effective than 12 months of heroin alone, both in the inhalation trial and in the injecting trial. Treatment response showed clinically-relevant improvements in all outcome domains. These changes were absent in non-responders, with the exception of a reduction in illegal activities in the participants who received heroin in addition to methadone. Many (82%, N=94) of the treatment responders in the experimental group deteriorated substantially in the two months after the planned discontinuation of the co-prescribed heroin, returning to the scores seen just before the start of the intervention on the multi-domain outcome index. In the two trials supervised, medical co-prescription of heroin to treatment-resistant heroin addicts was more effective and probably just as safe as methadone alone (Van Den Brink et al., 2003). Van Den Brink et al. (2003) state that the most important advantage of their study is that the observed effects of the co-prescription of heroin could not be attributed to a difference in the offer of psychosocial treatment between the experimental and the control group. This finding is important in relation to the Swiss trial where the impact of psychosocial interventions is not clarified. Limitations of this study include that a double-blind design is not employed and self-reported outcome data is exclusively employed.

Heroin provision, where it has been trialed, has been limited to particular patient groups. The UK Department of Health (1999) recommend that injectable opiates should only be given to patients with long, complicated and intractable histories of opiate dependence, and/or who have failed other forms of treatment. The Netherlands trial involves a group of drug misusers who it considered could no longer be helped by the regular care system. The effectiveness of heroin maintenance demonstrated under the conditions of clinical trials may not be replicated if the same degree of quality is not maintained in its scaling up (Hall, 1999). Injecting prescribed opiates per se does not reduce the risk of blood-borne infections among injecting drug users, rather, it is the use of clean needles, syringes and other equipment to inject heroin, prescribed medications or any other drug (Zador, 2001). Zador (2001) states that until a consistent and substantial body of data is accumulated supporting sustained positive outcomes of injecting opiate treatment for both the individual patient and the community, the harm minimization benefits of long-term, injecting opiate treatment can only be speculative, however plausible the arguments seem.

There is insufficient evidence on the effectiveness of heroin as a treatment. Ferri et al. (2003) state that no definitive conclusions about the overall effectiveness of heroin prescription are possible because of non-comparability of the experimental studies available. Results favouring heroin treatment come from studies conducted in countries where the treatment system is comprehensive and easily-accessible, methadone-maintenance treatment at effective dosages is available (Ferri et al., 2003). This is due to the limited amount of trials that have taken place. Hunt et al. (2003) catalogues that 4 small-scale trials have taken place in the UK between 1980 and 1998. One large trial, discussed above, has taken place in Switzerland, along with two trials in the Netherlands. Randomised controlled trials to date have been limited to four, the 1980 UK study, the Swiss study in 1998 and two large studies in Holland. Differences exist in the administration of these trials. In the UK studies, where the law permits the prescription of heroin, supervised consumption has not been part of the trial, as participants are given the drug to take home. There is little evidence that current prescribed heroin is diverted onto the illicit market but historically this was significant (Hunt et al., 2003). Both the Swiss and Dutch studies involved supervised consumption so the diversion of the drug to others is not an issue.

Key Points

- Maintenance of heroin drug users on methadone reduces the incidence of fatal and non-fatal heroin overdoses
- The goals associated with the introduction of supervised consumption rooms include the reduction of the incidence of infectious disease transmission, an improvement in the general health of IDUs and the increase of their use of appropriate primary health care and social services
- Supervised consumption rooms were established as a way of increasing contact with the most marginalised IDUs
- Introduction of supervised consumption rooms as part of a harm reduction strategy needs to give careful consideration to the context in which they are being introduced and to the required amendments in state legislation
- A limited number of trials have taken place on prescribing heroin; more research is required in this area
- Heroin trials have not fully examined whether improvements in health status are causally related to heroin prescription or as a result of the impact of the whole programme
- The knowledge base on heroin trials is not large enough to determine cost effectiveness and the different indications for heroin substitution treatment
- Injecting prescribed opiates does not reduce the risk of blood-borne infections, it is the use of clean drug-taking paraphernalia that achieves this harm-reduction aim

Chapter 6
Reducing Transmission of HIV, HCV and HBV

As outlined in previous chapters, harm reduction focuses on minimising the personal and social harms associated with drug use including the spread of blood-borne diseases such as HIV, HCV and HBV. This chapter of the report examines research on the effectiveness of harm reduction strategies specifically in relation to the transmission of HIV, HBV and HCV.

Studies demonstrate that NEPs reduce the transmission of HIV through the provision of drug-taking paraphernalia (e.g. Des Jarlais & Michael, 1996). It has also been demonstrated that NEPs provide IDUs with opportunities to engage with a variety of health care services such as counselling and referral to drug treatment programmes (Strathdee, Currie, Patrick et al., 1999). This engagement is facilitated through interaction with health care workers.

Implications of Sharing Drug-Taking Paraphernalia

The shared use of injecting paraphernalia carries a risk of infection from viral material remaining on injecting equipment after use (Chitwood, McCoy, Inciardi et al., 1990). Front- and back-loading increases the risk of HIV transmission by directly placing blood within the needle-syringe (Shapshak, Fujimura, Page et al., 2000). Front- or back-loading is the process of transferring a drug solution from one syringe to another (Office of National Drug Control Policy, 2003). Although new needles and syringes may be used, bacterial and viral infections may be spread by contaminated paraphernalia such as spoons, water, solvent or filters (Caflisch & Wang, 1999).

Gossop et al. (1997) found participants were least likely to report receiving syringes from casual acquaintances. As discussed above, IDUs in their study were more likely to report lending compared to borrowing syringes. This effect was not found for spoons and water containers, the receiving of which was treated in a less discerning manner. Back-loading was frequently reported by more than a third of the sample, with almost half of these reporting that they used the syringe of a casual acquaintance. Gossop et al. (1997) suggested that this might be seen as a less 'intimate' form of sharing, appropriate to engage in with a casual acquaintance, whereas needle sharing is perceived as being risky.

Almost one third of this sample tested positive for anti-HBV (HCV levels were not reported) and less than one percent tested positive for HIV. Gossop et al. (1997) concluded that it is possible that the sharing of injection equipment other than needles and syringes may be directly related to the high rates of HBV among IDUs.

Their findings may reflect the preventive messages about 'needle sharing'. The risks associated with the sharing of spoons and water have been largely ignored within these harm reduction messages. Gossop et al. (1997) recommend that detailed information warning about the sharing of paraphernalia should be included in harm reduction messages.

Hepatitis C

HCV, like HIV, is a blood-borne agent and is spread through the sharing of infected needles, cookers, spoons, other injecting paraphernalia and through front- and back-loading of drugs (Garfein, Vlahov, Galai et al., 1996; Van Beek, Dwyer, Dore et al., 1998). Unlike HIV, HCV is efficiently transmitted among IDUs (Pollack, 2001). The research suggests that treatment and prevention interventions are less successful in preventing HCV compared to HIV (Coutinho, 1998).

Hope, Judd, Hickman et al. (2001) found that anti-HCV prevalence rates among IDUs in England and Wales where comprehensive harm reduction programmes exist are lower in comparison to rates in other industrialised countries. Amongst those who had injected for less than two years, the prevalence of anti-HCV was 30% and the annual incidence of HCV infection was estimated to be 5%. In cross-sectional studies it is difficult to provide conclusive proof that estimated prevalence and incidence have decreased. Hope et al. (2001) recommend that prevalence and incidence of anti-HCV in IDUs with short injecting careers be monitored for a number of years.

Range of Services that Address HIV and HCV Risk Behaviour

Services that aim to reduce HIV and HCV risk behaviour in IDUs include health education, NEPs, prescription and administration of replacement drugs, provision of safer-sex education and easier access to free condoms. NEPs have been widely promoted as a harm reduction strategy for IDUs and now operate in many locations throughout Europe, North America, Australia and Asia. Traditional services are described as needle and/or syringe exchanges but in many cases a broader range of drug-taking paraphernalia is on offer to IDUs. These may include alcohol wipes, citric acid, sterile water, spoons or 'cookers', filters, and/or bleach. The range of paraphernalia available is dictated by local policy and current health care trends.

It has been clearly demonstrated that methadone treatment results in decreased heroin injection, overall improvement in health status and social functioning, and reduced risk of HIV infection among opiate addicts (Hartel, Schoenbaum, Selwyn et al., 1995). In addition, providing condoms through services provides an important link between active IDUs, medical and social services. These services need to be easily accessible and available if they are to have a positive impact on IDUs.

Persistent High HCV Transmission

Crofts, Aitken, Kaldor (1999) note that despite harm reduction programmes in Australia, HCV continues to spread. Crofts et al. (1999) studied used injecting equipment from ten injecting settings for the presence of HCV. HCV was detected on 70% of syringes, 67% of swabs, 40% of filters, 25% of spoons and 33% of water samples. These figures indicate that HCV is efficiently transmitted via drug-taking paraphernalia.

Speed (1998) writes that legislation in the UK sets targets related to needles and syringes, using these measures as indicators of success for NEPs. He notes that the sharing of injection paraphernalia has been largely ignored (Speed, 1998). Crofts & Aitken (1997) suggest that in order to control for HCV, it is not enough to promote non-sharing of needles and syringes – other strategies must be encouraged. These may include encouraging IDUs to use their drugs in ways other than injecting, more intense concentration on hygiene practices, education, and support of IDUs to avoid sharing any equipment associated with injecting.

The persistent high rate of the transmission of HCV is a concern for IDUs. The research indicates that HCV is a resilient virus and can be spread through sharing the complete range of drug-taking paraphernalia. The authors suggest that this has implications for those who snort or smoke drugs. The literature search generated no published material on the transmission of HCV between users who shared pipes. No literature was discovered on seroconversion rates of HIV, HCV or HVB in this group. Considering the resilience of HCV, research in this area is imperative.

It is evident from this review of the literature that sharing injecting paraphernalia is common and poses a major risk to the health and well-being of the user as well as having implications for HCV, HIV and HBV transmission. It is paramount that harm reduction programmes aim to reduce the sharing of all injecting and drug-taking paraphernalia in order to reduce the risks. The above studies emphasise that it is not sufficient only to highlight the risks associated with sharing needles and syringes. NEPs need to stress the risks associated with sharing other injecting paraphernalia.

North America

United States

In 1992, the New York State Health Department permitted the legal operation of 5 community NEPs. According to Des Jarlais & Michael (1996), these services expanded rapidly exchanging 1.75 million syringes in 1994. In their study the incidence of HIV in IDUs availing of NEPs in New York was compared to incidence rates of a group not attending a similar programme. Using meta-analysis, 3 studies on HIV incidences were combined. An individual-level protective effect against HIV infection associated with participation in NEPs was identified. Des Jarlais & Michael (1996) recommended the legal provision of sterile injection paraphernalia to reduce the risk of HIV infection in IDUs.

Canada

The continued transmission of HIV and HCV suggests that high numbers of IDUs are still sharing (Patrick, Tyndall, Cornelisse, et al., 2000).

The debate over the efficacy of NEPs has been partially fuelled by the experience of Vancouver, where an increase of 18% in the incidence of HIV among IDUs was reported (Strathdee et al., 1997). The prevalence of HIV among those who frequently attended the NEP was higher than those who attended less frequently (Strathdee et al., 1997). This high prevalence rate was attributed to an ongoing and

serious outbreak of HIV infection among IDUs in Vancouver. Expanding NEPs would help to reduce sharing further; several risk factors remain independently associated with needle sharing after adjustment for difficulty getting needles (Wood et al., 2001). Having difficulty getting sterile needles, needing help injecting, reusing needles and frequent cocaine and heroin injection were all associated with needle sharing.

Schechter, Strathdee, Cornelisse et al. (1999) conducted a study to examine if NEPs were causally related to the spread of HIV. They engaged in a prospective cohort study of 694 IDUs in Vancouver all of whom were HIV negative at the time of recruitment. At baseline and twice annually, blood tests were taken for HIV and HCV and participants completed an interviewer administered questionnaire. Schechter et al. (1999) hypothesised that NEPs per se were not causally associated with HIV transmission and that the apparent excess risk was due to the fact that the programme attracted participants who were at higher risk because of their risk behaviours.

In a systematic review of the effectiveness of harm reduction strategies regarding HCV in Canada, Leonard, Forrester, Navarro et al. (2001) reported various international studies suggesting that HIV prevention strategies have been relatively ineffective in preventing HCV. Leonard et al. (2001) included 15 relevant but largely methodologically weak studies. These results suggested that participation in NEPs or methadone maintenance programmes exerts no protective effect against HCV seroconversion. In prevention settings where harm reduction measures have contributed to the maintenance of low prevalence and incidence of HIV, transmission of HCV infection continues at extremely high levels. The sharing of drug-preparation equipment such as spoons and other injecting paraphernalia have been associated with the transmission of HCV.

Australia

In Western Australia the lowest rates of HIV among IDUs in the Western world are found (Lenton, Kerry, Loxley et al., 2000). However, while HIV rates are low, Australia's nationwide harm reduction strategy has been less successful in minimising the spread of HCV and HBV. HCV has a higher average transmission efficiency than HIV and may be transmitted on paraphernalia other than needles and syringes (Van Beek et al., 1998). IDUs in Australia commonly share swabs, spoons, filters, water and tourniquets (Crofts, Caruana, Bowden et al., 2000). The public health message of not sharing needles and syringes may be inadequate for control of HCV and other strategies must be canvassed such as encouraging different ways of using drugs.

A sample of 511 'hidden' drug injectors, of whom only 29% had any specialist drug treatment agency contact, completed a questionnaire that was distributed with the 'Fitpack' (Lenton et al., 2000). The study used a sample of the IDUs that are not typically seen in peer recruited and agency research. This is important as it may uncover trends in risk behaviour typically undetected in the large number of hidden injectors (Lenton et al., 2000). The questionnaire included questions on blood-borne viral infection risk behaviour. The mean age at which respondents first injected a drug was 19 years. The majority of the sample had injected less frequently than daily over the previous month. Overall, 40% had shared a needle (passed it on/received it) in the previous month. Those who shared needles were

more likely to share other equipment such as spoons, filters, water and tourniquets. Associated characteristics included being under 26 years of age, injecting daily and sharing with a sexual partner (59%) or a close friend (40%). In total, over half of the sample (59%) reported sharing other injecting equipment such as spoons, filters, water and tourniquets.

A total of 36% of the sample that reported sharing needles, cited not having enough money to buy a Fitpack as a reason. Almost 40% of the sample had reused their own needles. The most common reasons for reuse were cost of equipment, frequency of injecting and access issues. This highlights the need for education about the risks associated with reuse of equipment.

One suggestion from respondents included the sale of sterile water and swabs within the Fitpack. Vending machines were also suggested as an aid to alleviating difficulties with accessing drug-taking paraphernalia, indicating the need to extend this existing element of services.

Loxley (2000) reported that 3000 cases of HIV were avoided in Australia in 1991 due to NEPs, and suggested that savings in treatment costs were greater than costs associated with the operations of the programmes, a saving of 267 million Australian dollars. However, HCV transmission is being continued, primarily through shared injecting equipment. It is recommended that NEPs expand to ensure that IDUs always use sterile injecting paraphernalia (Loxley, 2000).

Hurley & Jolley (1997) used an ecological study design to measure the effectiveness of NEPs for the prevention of HIV. They compared changes over time in HIV seroprevalence in IDUs worldwide for cities with and without NEPs. The authors clearly defined NEPs, specified inclusion criteria for the study and described how they calculated the rate of seroprevalence for each city. The average rate of seroprevalence change was compared between cities in which no NEP was introduced during the seroprevalence period and those in which an NEP had been introduced when seroprevalence among IDUs was below 10%. Logistic regression analysis was used. A total of 81 cities with HIV seroprevalence measurements for more than one year and information on NEP implementation were identified. Hurley & Jolley (1997) reported that in cities with NEPs, HIV seroprevalence among IDUs decreased on average whereas the opposite was true in cities without NEPs. They concluded that NEPs led to a reduction in HIV incidence among IDUs. NEPs have the potential to directly decrease HIV transmission by lowering the rate of needle sharing and indirectly through activities such as referrals to drug treatment centres and education about 'at risk' behaviour (Hurley & Jolley, 1997).

Europe

The experience of Amsterdam (Buning, 1991) suggests that harm reduction programmes facilitate a low level of HIV seroprevalence amongst drug users in these cities. Multicentre studies in London (Stimson, 1996) indicated that HIV incidence amongst IDUs can be reduced by participation in harm reduction programmes. Stimson (1996) noted that the implementation of these programmes has often been resisted by local communities for fear of adverse effects on their business and that such areas will be labelled as 'drug areas'. In order to introduce such programmes into a community, effective communication is necessary to alleviate these concerns. Further European studies are discussed amongst others in the section below.

Injecting Risk Behaviour

The main aim of NEPs is to reduce risky injecting behaviour (Cox & Lawless, 2000). Wood et al. (2002) conducted a study to identify why IDUs have difficulty accessing needles despite the availability of NEPs. Participants were recruited from the Vancouver Injection Drug User Study (VIDUS) and included IDUs (N=942) who returned for follow-up during a one-year period. Of these, 81% injected drugs in the last 6 months and were included in the study.

Participants were divided into 2 groups, those reporting difficulties accessing needles compared to those with ease of access. Non-parametric tests were carried out to compare the two groups. Data was stratified so that participants were divided into those who acquired most of their needles from fixed site NEPs, exchange vans or from pharmacies. Wood et al. (2002) reported that the most common reasons regarding difficulties accessing sterile needles included the operating hours of the NEP, difficulty meeting the exchange van, being away from the area where needles were being exchanged, being refused sterile needles at pharmacies and being incarcerated in the last 6 months. Frequent cocaine injection and bingeing were also reported as being associated with difficulties accessing needles.

In the overall logistic regression model, characteristics associated with difficulty accessing sterile needles included youth, being male, frequent injecting and living farther away from the exchange facilities. Operational difficulties within the NEPs were associated with difficulties in accessing needles. Being incarcerated was also associated with needle sharing, therefore the importance of considering NEPs within the prison services must be acknowledged. Wood et al. (2002) reported that IDUs who obtain needles exclusively from needle exchanges were half as likely to share needles than IDUs who acquired their needles from other sources. This suggests that NEPs are an important factor in minimising sharing of injecting paraphernalia.

Klee, Faugier, Hayes & Morris (1991a) compared IDUs who regularly attended NEPs with those who attended rarely or not at all. They concluded that regular use of NEPs was associated with the lending and borrowing of equipment with others in the 6 months prior to the interview. Almost 60% of those attending a needle-exchange lent injecting equipment to others compared to 42% of non-attenders. The main reason reported for passing on equipment was pressure from non-attending friends. The results also indicated that the attenders were less likely to borrow injecting equipment (36%) compared to non-attenders (39%).

Further analysis demonstrated that regular users in long-term treatment were less likely to pass on their equipment (48%) compared to those who were in short term treatment (36%) or those not attending treatment (34%). Klee et al. (1991a) suggest that the influence of NEPs is likely to be affected by many factors including availability of equipment, age profiles of injectors and the user-friendliness of the service.

In another study by Klee et al. (1991b), risk behaviour among IDUs in the North West of England was investigated. Information was collected on respondents' sharing of injecting equipment, respondents' sexual partners and the use of condoms. A total of 303 IDUs were interviewed at time 1 (T1). Between 6 and 9 months later (T2), 56% of this group were interviewed using a semi-structured interview. The emphasis at T2 was to assess changes in users' risk behaviours. Results indicated that there were significant reductions in sharing, mostly in the more indiscriminate use of others' injecting equipment. Sharing between friends showed less decline. There was no reported change in sharing between sexual partners. Klee et al. (1991b) suggest that harm reduction messages aimed at partners should focus on the unknowns of past and current sharing practices. These authors also note that there is a considerable level of unprotected sexual activity by those who are sharing injecting paraphernalia. Unprotected sexual activity is associated with the transmission of HIV, HBV and HCV. This issue needs to be addressed within a harm reduction programme. The majority of the sample had not changed their behaviour particularly with regard to borrowing equipment.

In a study of 111 IDUs in Marseille, Lovell (2002) concluded that risky injecting behaviour exists despite harm reduction strategies such as needle dispensing machines. Lovell (2002) suggests that targeting individual-level characteristics and providing clean paraphernalia and related information may not be sufficient to change the distribution of risk. She states that understanding the importance of other factors such as social issues and context helps to explain why some IDUs 'risk risk' (Lovell, 2002). Lovell (2002) hypothesises that risky injecting behaviour is closely tied to extreme poverty and that amongst the disadvantaged drug injectors, a subgroup exists that lacks either the resources or the social competency to procure drugs. This led to behaviours that included receiving 'tastes' of drugs from others used syringes, and extracting heroin residue from used filters and discarded syringes. In her study she also notes a second observation on risky injecting behaviour, which was the contradiction of police harassment co-existing with legal NEPs. Law enforcement officers kept track of mobile NEPs as a means of tracing drug traffic. IDUs stopped using the van programme because of police activity nearby. Similarly, some neighbourhoods in which IDU was high, opposed the establishment of mobile NEPs meaning users had to leave the area to access sterile equipment.

Keene, Stimson, Jones & Parry-Langdon (1993) conducted a study to evaluate NEPs for HIV prevention among opiate and non-opiate IDUs in Wales. IDUs attending 8 NEPs were monitored with comparative cross-sectional studies of non-attenders from the IDU population in 1990 and 1991. Information on risk behaviours was collected by questionnaire. Non-attenders were recruited through drug users, pharmacists and drug services' staff. All NEPs in this study offered needles, syringes, safe containers and AIDS literature. Most offered swabs and condoms. In 1991, 17% of attenders had shared in the last year, compared to 53% of non-attenders. Sharing in the past 4 weeks had occurred in 9% and 10% of attenders in 1990 and 1991 respectively compared to 41% and 49% of non-attenders. Having no money to buy clean equipment was reported as a reason for sharing paraphernalia.

A similar proportion of both attenders and non-attenders reported cleaning their equipment before sharing (86% and 85% respectively). This study suggests that NEPs play a role in minimising risk behaviours regarding sharing injecting paraphernalia.

The above literature suggests that NEPs are effective in reducing injecting risk behaviour among regular attendees. Cox and Lawless (2000) note that the influence of such harm reduction programmes upon sharing of paraphernalia is not straightforward. They comment that it is likely to be affected by many extraneous factors such as availability of equipment, profile of injectors, educational strategies and user-friendliness of the service. Wood et al. (2001) concur that several risk factors remain independently associated with needle sharing; having difficulty getting sterile needles, needing help injecting, reusing needles and frequent cocaine and heroin injection. Wood et al. (2001) acknowledge that NEPs are unable to address all of these issues.

Key Points

- Injectors frequently report sharing needles and syringes due to difficulties in accessing them
- Access to needles and syringes varies both nationally and internationally through contact centres, outreach workers, vending machines, mobile vans and pharmacies
- Variations exist in opening hours of harm reduction services
- The public health message of not sharing needles and syringes may be inadequate for control of HCV and other strategies should be promoted such as encouraging other ways of using drugs other than injecting
- Greater emphasis on HCV transmission as part of NEPs may ensure that drug users perceive the sharing of drug-taking paraphernalia as risky behaviour
- Users may need education about the risks associated with reuse of equipment
- Harm reduction messages aimed at partners should focus on the unknowns of past and current sharing by IDUs
- The research indicates that the harm reduction message of safe-injecting practices is not being received by young injectors
- Research on HCV transmission associated with sharing pipes and other equipment to date is insufficient and needs to be developed
- Longer duration of drug use is consistently associated with acquiring HCV in IDU

Chapter 7
Harm Reduction Programmes in Ireland

In this chapter the development of harm reduction programmes in Ireland is considered. The nature and extent of services available in Ireland is presented and the regional distribution spread of services is discussed. Reference is made to the effectiveness and uptake of services and the NDS (2001) aims in relation to harm reduction. Research on the effectiveness of Irish services is presented.

Since 1992, the Irish Government has actively pursued a policy of harm reduction for IDUs by providing methadone maintenance and needle exchange at both regional and local levels (Butler, 1991). The emphasis on a pragmatic harm reduction approach has developed in line with increasing concern about the health implications of the rise in the incidence of HIV, HBV and HCV (Northern Area Health Board, 2001). In Ireland in the early 1980s, the sharing of non-sterile needles and syringes led to IDUs being identified as a high-risk group for the development of HIV (Butler, 1991). Of the total number of HIV positive cases reported to the end of June 2002, 37% were IDUs (NDSC 2002). The EMCDDA (2002) annual report estimates that about 5.7% of the Irish population between the ages of 15-64 engage in problem drug use. Problem drug use is defined as injecting drug use or long/duration use of opiates, cocaine and/or amphetamines (EMCDDA 2002). The highest estimates are reported for Italy, Luxemburg, Portugal and the United Kingdom, while estimates are lowest in Austria, Germany and the Netherlands. According to the NACD (2003) problem opiate use in Ireland is estimated at 5.6%. in 2001.

The number of opiate users in the Eastern Regional Health Authority (ERHA) catchment area in receipt of methadone rose from 150 in 1992 to 3,000 by the end of 1997 (Fitzgerald, Barry, O'Sullivan & Thornton, 2001) and to 6, 672 at the end of January 2003.

The development of drug services has seen improvements in the type and quantity of data being collected on drug use and associated treatment. One of the advances in this area is the creation of a central list quantifying the number of people in treatment. Current figures on the Central Treatment List (ERHA 2003) indicate that there are now 6,883 at December 2003 (National Drug Treatment List 2003) accessing treatment from a range of services. This information is a useful tool both in monitoring the uptake of current services and in planning future developments.

Table 1: Central Treatment List (ERHA 2003) – all people registered for treatment

Breakdown of Patients	Dec 2003
ERHA Clinics	3,543
National Clinics	123
Trinity Court	501
Prisons	402
General Practitioners within ERHA area	2,160
General Practitioners outside ERHA area	154
Total	**6,883**
Area Breakdown of Participating Pharmacies	
Pharmacies within ERHA area	187
Pharmacies outside ERHA area	108
Total	**295**
Area Breakdown of Participating General Practitioners	
The No. of GPs participating within the ERHA area	171
The No. of GPs participating outside the ERHA area	34
Total	**205**

Action 22 of the current Health Strategy, *Quality and Fairness – A health system for you* (Department of Health and Children 2001), refers to initiatives to improve the health and well being of drug users through the implementation of the NDS by 2008. The National Drug Strategy contains 100 key actions to be implemented by the various stakeholders. The salient points in reference to this review are presented below.

The National Drug Strategy (2001-2008)

The overall aims of the NDS (2001) are based on:

- The reduction of risk behaviour associated with drug misuse
- The reduction of the harm that drug misuse causes to individuals, families and communities
- Enabling people with drug misuse problems to access treatment and other supports in order to re-integrate into society.

It is clear that the NDS is supportive of harm reduction with respect to the drug users, their families and communities. While harm reduction can be defined as a concept based on the prevention and reduction of negative health consequences associated with drug misuse, the NDS lacks a clear definition of harm reduction. The inclusion of an ultimate aim of a drug-free life in reference to harm reduction is not consistent with a harm reduction message.

Action 62 of the NDS proposes a review of the existing network of needle exchange facilities, with a view to ensuring access for all drug users to sterile injecting equipment. Action 63 is a commitment to set up a pilot Community Pharmacy NEP in the ERHA, and action 69 deals with the development and implementation of collection and safe disposal facilities for injecting equipment.

A working committee comprising of various representatives of the three ERHA area health boards was established in December 2002 to oversee the implementation of these actions.

Current Irish Services

The Northern Area Health Board (NAHB), the South Western Area Health Board (SWAHB) and the East Coast Area Health Board (ECAHB) offer harm reduction programmes including needle exchange from fixed sites, mobile units and outreach work. Outreach workers frequently practise 'backpacking' – a process whereby staff, in the absence of a local clinic or mobile unit, carry supplies of drug-taking paraphernalia for distribution to known drug misusers. Additional services operate from the Merchants Quay Project, and other sites in the greater Dublin area run in partnership with the ERHA and a number of voluntary organisations. Some of these services are on a sessional basis or simply a fixed time once per week. Outside the ERHA, harm reduction services are less developed and have not yet produced statistics on attendance figures. The range of harm reduction services varies from site to site, which is described in chapter 8. Harm reduction services report initiatives including free needle exchange, alcohol wipes, sterile water, citric acid filters, spoons, condoms and the provision of methadone.

The uptake of harm reduction by IDUs can be monitored through attendance rates at NEPs, although attendance figures do not indicate the quality of services. The average weekly numbers attending needle exchanges in the ERHA and the Merchants Quay Project are presented in Table 2 below (Working Group on Needle Exchange, 2003). From this it is evident that the Merchants Quay Project has a greater number of attenders in comparison to NAHB, SWAHB and ECAHB services.

Table 2: The Estimated Weekly Numbers Attending NEPs

NAHB	100
SWAHB	50-70
ECAHB	80-110
Merchants Quay	400-500 of whom 20 are new attendees per week

NAHB Harm Reduction Programmes

In the 2001 Provider Plan, the NAHB stated that harm reduction measures would continue to be a focal point for their service provision. Their strategy aims to concentrate on making risk practices as safe as possible as well as trying to change long-standing risk behaviour. To date these initiatives include the recruitment of a hepatitis C co-ordinator nurse to maximise links between acute hospitals and drug services and to ensure integrated service delivery for people with HCV who use drugs.

In 2002, harm reduction programmes available in the NAHB included methadone treatments, NEPs, screening for HIV, HCV, HBV and sexually-transmitted diseases (STDs), a mobile clinic that provides both a low-dose methadone programme and a specialist programme for women in prostitution. There were 2,341 reported drug users in treatment within the NAHB by the end of 2001 (NAHB, 2002).

Harm Reduction in Detention Centres and Prisons

The NAHB (2001) stated that one of their targets is that prisoners be appropriately identified as having a drug-addiction problem and receive necessary treatment. It is also suggested that their treatment is followed up on committal and in the community upon release. In this way, the addiction services would be able to provide continuity of care both within and outside the prison. There is inequity in the range of services available to IDUs detained within the prison system compared to those available within the community.

South Western Area Health Board Harm Reduction Programmes

In the 2002 Provider Agreement, the SWAHB stated that it aimed to provide high quality, accessible and responsive addiction services. Within the SWAHB, services provided include NEPs, provision of harm reduction information and advice regarding safer sex practices. In addition to the above services, backpacking is also available. They also provide methadone treatment and maintenance.

East Coast Area Health Board Harm Reduction Programmes

In the 2002 Provider Agreement, the ECAHB stated that its addiction service aims to assist individuals, families and communities affected by substance abuse. The ultimate goal of the service is to help the individual abusing substances to achieve and maintain a drug-free lifestyle. The Board recognises that this goal is not feasible for everybody and a variety of interventions are provided to enable the individual abusing substances to achieve as normal a lifestyle as possible. NEPs operate from several locations along with the provision of harm reduction information, safer injecting information and safer sex information. A mobile bus service and a backpacking service are also provided within this area Board. They also provide methadone treatment and maintenance.

Sharing of Drug Taking Paraphernalia in Ireland

In a cross-sectional study of 246 IDUs attending addiction services in Dublin, Smyth, Barry & Keenan (2001) found that 70% of participants reported syringe borrowing. Using multivariate analysis, they identified seven characteristics associated with this risk behaviour. IDUs with long injecting histories who injected less frequently were more likely to borrow. The authors suggested that these 'established, less frequent injectors' inject more opportunistically and may become complacent over time about sharing with other IDUs. Injection of more than one substance and having more intimate social relationships with other IDUs were also significantly associated with syringe borrowing. This finding supports the international literature in relation to this point (Cassin, Geoghan & Cox, 1998, Gossop et al., 1997, Stark, Muller, Wirth et al., 1995, Saxon, Calsyn & Jackson, 1994).

Smyth et al. (2001) reported that almost one quarter of the IDUs who borrowed syringes did so frequently (i.e., more often than one-in-every-10 injections). Only 13% of the sample had completely avoided borrowing spoons or filters from other IDUs. 'Halving' was frequently practised. According to Smyth et al. (2001), these findings contribute towards explaining the early acquisition of HCV by IDUs in Dublin. Overall, studies on the frequency of sharing equipment highlight that this is an issue that needs to be vigorously addressed in harm reduction services.

Smyth et al. (2001) identified that syringe borrowing persists amongst IDUs in Dublin despite the existence of harm reduction programmes and recommends that interventions should include exploring the unique attitudes and beliefs regarding unsafe injecting with each individual. The findings of Dolan et al. (2003), Smyth et al. (2001) and Wood et al. (2001), all suggest that NEPs on their own are not sufficient to eliminate the risks associated with sharing drug-taking paraphernalia.

Prevalence of HIV, HBV and HCV in Irish Drug Misusers

Consistent approaches to screening for infectious diseases support the development of a profile of prevalence and incidence rates of blood-borne infectious diseases among IDUs. This information is valuable in the ongoing development and evaluation of harm reduction services. The National Disease Surveillance Centre (NDSC) compiles and publishes statistics and information on the transmission rates of blood-borne infections in Ireland. This information is broken down to show trends in the most common exposure categories. Currently IDUs account for 37% (1048 cases) of those diagnosed with HIV in Ireland (NDSC 2002). Analysis of the figures published by the NDSC show that the number of cases of IDUs with HIV infection steadily increased between 1998 and 2000. During the following year 2001-2002, a reduction of almost 50% in this category is recorded, (see table 3). This trend to a lowering rate of infection requires ongoing analysis to ascertain if a link can be found between expansion of harm reduction services and reduction in the rates of transmission of HIV. It must also be emphasised that newly-diagnosed infections do not represent HIV incidence, as diagnosis may be several years after infection is acquired (Cronin, & O' Donnell, 2002).

Table 3

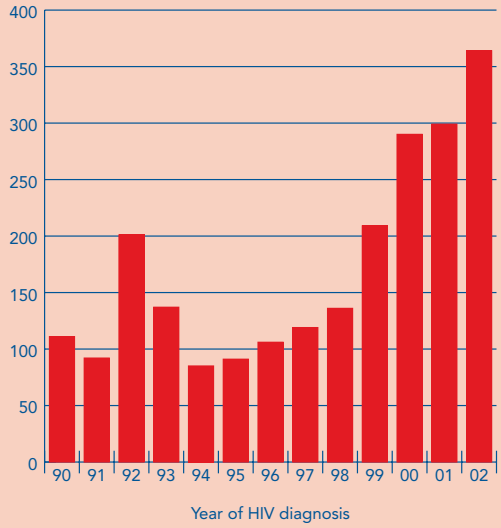

Figure 1: Annual number of HIV Infections (1990 to 2002)

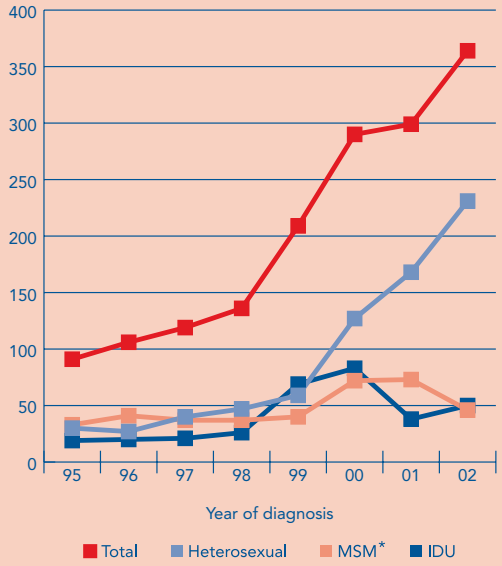

Figure 2: Newly diagnosed HIV infections in Ireland among heterosexuals, MSM and IDU's (1995 to 2002)

* MSM - men who have sex with men

(National Disease Surveillance Centre 2002)

Trends in HIV prevalence over time are important for policy and evaluation purposes. In recent years, increases in HIV transmission have occurred in regions or cities in Europe such as Ireland, Italy, the Netherlands, Portugal and Finland (EMCDDA 2002). The EMCDDA (2002) record a prevalence rate of 3.5-8.7% of HIV infection between 1996 and 2001 in Ireland among IDUs. Highest rates are recorded for Spain of 33.5% and lowest for Sweden at 2.6%. However, these figures need to be interpreted with caution as source types may differ, for example prevalence rates in Spain are taken from IDUs in treatment and may not represent IDUs not in treatment.

In Ireland, information on viral hepatitis rates is reported under the headings viral hepatitis type A, viral hepatitis type B and viral hepatitis unspecified. The NDSC (2001) records a total of 90 newly-reported cases of viral hepatitis unspecified in 2001. These figures are classified by age category, with 12 people aged 20-24 years, 40 aged 25-34 years and 11 respectively in the 35-44 and 45-54 age groups reported as becoming infected in 2001. The remaining age categories recorded infection rates of fewer than 5 people in each range. This predominance of infection with HCV in the age group 20-54 is consistent with the age group most associated with drug misuse. HCV prevalence is extremely high in all countries and settings in Europe, with infection rates of between 40 and 90% among different sub groups of IDUs (EMCDDA 2002). The EMCDDA (2002) reports a prevalence rate of 72-73% of HCV infection among IDUs between 1996-2001.

In Ireland there has been no routine data collection on HCV prevalence rates (Dillon & O'Brien, 2001). However, there have been a small number of studies carried out on various samples of drug users revealing a high prevalence of HCV among Irish IDUs. Smyth, Keenan, Dorman & O' Connor (1995) conducted the first Irish study of HCV infection among IDUs. They identified a sample of 272 IDUs in treatment and reported a HCV prevalence rate of 84%. Among those who had been injecting for between 6 months and 2 years, the reported prevalence of HCV was 70%. Among those with an injecting history of greater than 2 years, a higher prevalence rate of 95% was reported. A study by Crofts, Stewart, Hearne et al. (1995) supports the findings that longer duration of drug use is consistently associated with HCV in IDUs. Smyth et al. (1995) reported a significant gender difference in relation to infection: of the 194 males, 80% tested positive compared to a 94% positive rate among the group of 78 females.

Many localities outside Ireland report HCV prevalence above 85% among active users (Pollack, 2001).

Other Irish studies have reported HCV prevalence rates of between 52% (Smyth, Keenan & O'Connor, 1999) and 79% (Fitzgerald, Barry, O'Sullivan & Thornton, 2001). Smyth, Keenan & O'Connor (1998) reported that of 733 consecutive new attenders at a treatment centre between September 1992 and September 1997, 62% were identified as HCV positive. In the following year, in a sample of 353 consecutive new attenders, Smyth et al. (1999) identified a comparatively lower prevalence rate of 52%.

Effectiveness of Irish Harm Reduction Strategies

The introduction of NEPs represented the first Irish public health policy explicitly advocating harm reduction interventions aimed at reducing HIV risk behaviour, without necessarily reducing illicit drug use (Cox, Cassin, Lawless & Geoghegan, 2000). International research demonstrates that NEPs are useful in the delivery of an effective service, improving access to sterile injecting equipment and reducing levels of injecting risk behaviour. These programmes may be a useful referral source for IDUs and may operate as a point of entry into additional treatment services.

Cox et al. (2000) conducted the first Irish study examining the effectiveness of NEPs as a harm reduction strategy over an 18-month period. A total of 370 IDUs completed questionnaires on two occasions, time 1 (T1) and follow-up data at time 2 (T2), three months later. Two structured questionnaires were administered at T1 and T2 by trained staff. In line with the trends in the literature, the majority of the group was male (79%) with a mean age of 23 years. Their average injecting career was 2.6 years and almost half of the sample had served a term in prison. A total of 5% of the sample reported being HBV and 16% being HCV positive.

The results support the position that NEPs play an important role in significantly reducing the numbers reporting both the use of heroin as a primary drug at T1 (94%) and its frequency of use at follow up (87%). A total of 67% of those who reported injecting their primary drug four or more times a day at T1 had reduced that to once a day or less by the follow-up period. At follow up, respondents were significantly more likely to report hygienic and safer injecting practices. There was a 44% increase at T2 in respondents who reported cleaning their injecting site.

At T1, 24% of the sample reported recent borrowing and 15% recent lending of needles and syringes. There were significant changes in both behaviours across T1 and T2. Over 70% of those who reported borrowing at T1 had ceased this behaviour at T2. Respondents reported a decrease in lending used needles and syringes at T2.

Although there were significant reductions in reported borrowing and lending of used needles and syringes, there were no significant changes reported in sharing injecting paraphernalia or in condom usage. Additionally, between T1 and T2, 41% of respondents commenced sharing injecting paraphernalia such as spoons and filters. This finding is of particular concern within an Irish context, as sharing injecting paraphernalia is reported as a means of facilitating the spread of HCV. Cox et al. (2000) suggest that greater emphasis be placed on the provision of information regarding HCV transmission.

Cox et al. (2000) recommend that service development should include NEPs at local levels, including strategies such as strategically-placed vending machines, mobile exchanges and pharmacy involvement in distribution. Increased availability of paraphernalia cannot eliminate all sharing behaviour as environmental, economic, cultural and social factors can impact on sharing injecting paraphernalia (Klee et al., 1991a). Cox et al. (2000) support the contention that NEPs can be an effective public health initiative in reducing sharing of drug-taking paraphernalia.

Smyth et al. (1999) hypothesised that there would be a lower prevalence of HCV in those who started injecting between 1991 and 1993 as a result of the increase in harm reduction programmes in Dublin. Consecutive attendees at a drug service were tested for anti-HCV between 1993 and 1996. Results indicated that those who started injecting between 1991 and 1993 and those with injecting histories less than 13 months were at a reduced risk for HCV. This study supports the effectiveness of service expansion with the reduction of unsafe injecting practices. As controls for other factors are excluded, results need to be interpreted carefully.

In another cross-sectional study, Smyth et al. (2001) indicated that in the 6 months prior to the study, 87% of respondents borrowed spoons and filters from other IDUs on more than one-in-every-10 injections. A total of 70% borrowed syringes from others. The high level of recent unsafe injecting by this young population (median age of 22 years) helps to explain the early acquisition of HCV by IDUs in Dublin. The rate of reported recent sharing was greater than that found in a previous Irish study (Dorman, Keenan, Schuttler, et al., 1997). Smyth et al.'s (2001) study suggests that the messages about risk behaviour are not being transmitted in a timely manner to young IDUs.

The results of Smyth et al. (2001) do not support a hypothesis that unsafe injecting has reduced in response to an expanded harm reduction programme. Smyth et al. (2001) suggest that this may be due in part to the population being younger than that in other studies. The data suggests that those who inject benzodiazepines as well as heroin appear to be particularly at risk. According to the Report of the Benzodiazepine Committee (Department of Health and Children, 2002), heroin was most commonly reported as the main drug of abuse in 1997 and in 1998. This suggests that harm reduction programmes need to be aware of polydrug use and incorporate relevant interventions such as comprehensive assessment and treatment of all drug-taking behaviours into their programmes.

Dorman et al. (1997) measured HIV prevalence and risk behaviour in 185 Irish IDUs. They found that 56% shared and 62% lent injecting equipment in the previous six months. The vast majority of those who shared (94%) always cleaned needles before use, but only half of this group cleaned needles in an efficient manner. This finding suggests that over half of the sample engaged in risky injecting behaviours and adds to the body of literature that reports sharing injecting equipment as a risk behaviour engaged in by Irish IDUs.

Cassin et al. (1998) compared injecting and sexual risk behaviour of young injectors with those greater than 25 years of age. All respondents (N=770) presented for the first time at the Merchants Quay Project between May 1997 and February 1998. Data were collected by means of a structured questionnaire at baseline and 3 months later.

The results indicated that young injectors are more likely to report recently borrowing and lending of used needles and syringes and other drug-using paraphernalia. This finding is also supported by Mullen & Barry (1999) who reported that sharing was more prevalent in the younger age group, decreasing significantly in those over 30 years of age. This suggests that young injectors are not responding to harm reduction messages. In Cassin et al.'s study (1998), young injectors were more likely female, had started injecting earlier than their male peers and were using heroin. Both groups were polydrug users. Young injectors were also less aware of their HCV status than the older group and were less likely to report having had a HIV test or been vaccinated against HBV.

Cassin et al. (1998) noted that the high levels of risk behaviour in young injectors may be due to the lack of emphasis on harm reduction strategies in the years prior to the study. Sendi et al.'s (2003) study found that individuals with a longer history of injecting drug use and of a younger age were more likely to withdraw from an intravenous opiate-maintenance programme. This finding supports the proposal that younger users need particular considerations. The results suggest that harm reduction messages regarding minimising risks associated with sharing injecting paraphernalia need to be appropriately and adequately targeted towards young users.

Key Points

- International trends in the concepts and methods associated with harm reduction have been established during the past two decades
- The Irish Government has supported harm reduction strategies since 1992
- Three actions for harm reduction are identified in the National Drug Strategy (2001-2008)
- Harm reduction programmes in Ireland are mainly concentrated in the Eastern region
- Harm reduction programmes operate in a range of settings, fixed sites, mobile units and through outreach work
- Ongoing surveillance of the transmission rate of blood-borne infection amongst IDUs may provide useful information about the outcome of harm reduction programmes

Chapter 8
Self Reporting on Harm Reduction in Irish Services

There is a dearth of published literature on how Irish harm reduction services conduct their work. Statistics are available within some services on gender, age, and uptake of screening for infectious disease and the numbers of IDUs who attend services. However, these statistics do not indicate what formal and informal links harm reduction services have with other agencies, how services operate with regard to health care advice, or whether they have developed appropriate policies and procedures. There is no published information available profiling the group of staff delivering these services, indicating what access they have to ongoing education and training or recording their concerns and difficulties in operating harm reduction services. The ERHA have commenced work on profiling this group of staff. The authors believed it would be beneficial to gather information from primary sources about the day-to-day work conducted in Irish harm reduction services.

Questionnaire Design and Research Methodology

In order to amass the required information, a purposeful sample of services was chosen. The most appropriate method of gathering this information was to conduct a series of telephone interviews with staff working in addiction services. Key informants were identified through the Regional Drug Co-ordinators and Area Operations Managers within the Health Boards.

The literature review informed the authors of the questions to address to service providers. A questionnaire was designed (Appendix A) and a pilot study conducted to test its suitability for gathering the required information. Following piloting, the questionnaire was reviewed and modified to the needs of the project. The questionnaire included a total of sixteen closed and open questions that enabled the authors to gather data including informants' experience and beliefs about service delivery.

Each interview took 30 minutes to administer. Three members of the project team conducted interviews. Initially telephone contact was made with the identified informant in which they were given information about the review and the purpose and duration of the telephone interview. A suitable time was agreed to conduct the interview. In order to ensure the anonymity of respondents and the service in which they operated, they were informed that material they shared would be included as part of the overall report but not linked directly to the service they provide. To account for the concentration of services on the east coast, the information presented outlines, similarities and differences between information received from ERHA respondents and respondents from other Health Boards. Following the interviews, written transcripts were collated and this generated the information presented below.

To gain a national spread of responses, informants were contacted in each Health Board Area. Representatives from all of the Health Board Areas were approached. All of the services contacted were supportive and actively participated in the study. A total of 16 respondents were contacted. Of the 16 contacted, 13 reported that their work included harm reduction with drug users who used paraphernalia to administer drugs. Engaging with this identified group of drug users was an essential inclusion criterion. The interviews were discontinued in 3 cases when the harm reduction worker responded that drug users who shared drug-taking paraphernalia were not availing of services in the area. The authors are aware of the limitations inherent in a small sample group. However, the information generated concurred with material highlighted in the literature review. This limitation must be taken into account when generalising about national harm reduction services.

Scope and Limitations of the Study

The sample size in this study is small for a variety of reasons. These include the scope, terms of reference and duration of the study. A purposeful sample was therefore chosen upon considering these factors. Despite the small sample, a number of interesting points were generated which reflected material in the literature review, adding support to their validity. However, it is difficult to generalise about national services based on these findings as other potential useful informants may have been excluded.

All of the respondents acknowledged that their work included harm reduction, including the three in which interviews were discontinued as described above. One respondent outside of the ERHA commented that there is no official harm reduction programme in place in that service, however some staff engage in harm reduction activities.

Addictions Treated

Services outside the ERHA mainly treated alcohol misuse and illegal drugs such as cannabis and ecstasy. A number of these services (N=3) reported treating heroin users and one respondent mentioned that they offer services to a small number of IDUs.

In contrast, all respondents within the ERHA reported treating IDUs. All respondents working within the ERHA commented that they treat opiate users including three reports of treating cocaine use. A minority of respondents reported treating benzodiazepine addiction. Clearly, service provision within the ERHA is more focussed on opiate users than that provided within other Health Board areas.

Harm Reduction Programmes Offered By Irish Services

Outside of the ERHA, harm reduction programmes mainly consisted of methadone provision. In contrast, harm reduction programmes within the ERHA were broader in scope, providing free needle exchange alongside methadone maintenance.

One-for-one needle exchange is provided although one respondent made a comment that more needles may be provided to well-known clients. Alcohol wipes, sterile water and citric acid are provided by all services within the ERHA. Filters are provided by half of the ERHA respondents with the majority also providing spoons. No respondent reported providing pipes.

In reference to the promotion of safe practices, the majority of respondents within the ERHA promote safety in sharing other injecting paraphernalia. The responses within the ERHA sample reflect recommendations in the literature around minimising the risks associated with sharing injecting equipment. Providing users with the means to change risk behaviour is important. Many of the services represented here provide education and equipment to promote safety in sharing injecting paraphernalia.

Reported Purpose of Harm Reduction Programmes

Similar responses were provided from service providers nationally regarding the main purpose of their harm reduction programmes. The majority reported the main purpose as reducing harm to drug users. Other comments included reducing the transmission of infectious diseases. Two ERHA respondents reported linking drug users into their or other services for support. The provision of education in relation to safe injecting practices was reported by half of the ERHA respondents.

Reported Targets of Harm Reduction Programmes

In addition to drug users and IDUs being targeted for service provision, some respondents commented that women with children are a priority target. All respondents mentioned that the homeless and those with HIV are priority groups for services. Those with mental health issues, polydrug users and those linked to methadone programmes were also mentioned.

The vast majority of respondents (all ERHA and some outside the ERHA) reported that specific issues such as HIV, HCV and HBV are addressed. Sexual health, lifestyle issues and infection prevention in relation to needle sites were included within the responses.

Harm Reduction Strategies and the Specific Issues They Address

All respondents within the ERHA reported providing information on choosing, rotating and caring for injection sites. Only a minority outside the ERHA reported the same. The majority of those working within the ERHA, unlike those working elsewhere, commented that they discuss issues with IDUs around specific injecting techniques. Respondents nationally reported differences in the manner of recording what health care advice is being delivered.

Similar themes emerged across the sample, which included: offering advice and education around safe practice, overdosing and general health issues. Within the ERHA, half of the respondents reported providing education and advice around safer smoking and polydrug use. A number of respondents in both groups reported providing condoms. No respondent reported delivering advice about alternative methods of drug administration, which contradicts recommendations highlighted in the literature.

Access to Services

In the main, services were described as opening during office hours. Three people within the ERHA reported some evening opening hours. Weekend opening hours were only reported by two services outside the ERHA.

Limited opening hours for many contribute to the sharing of injecting paraphernalia. The literature indicates that users share paraphernalia despite the associated risks when clean equipment is inaccessible. Countries including Germany and Switzerland use vending machines, which dispense needles to minimise the problems associated with limited opening hours. The low reported regional spread of IDU should not encourage complacency about the availability of needle exchange. The

literature indicated that particular groups such as prisoners and young people tend to be opportunistic about IDU and therefore it is imperative that access to appropriate paraphernalia is improved. Where it is not viable for Health Boards to provide exchange services or extend opening hours, initiatives such as vending machines and dispensing through community pharmacies should be considered.

Services nationally reported that drug users could access services without a prior appointment. Some services also reported a referral system. It is important to note that even though access is freely encouraged, all services reported high levels of activity, indicating that the amount of individual time that can be spent with each attendee is limited. This coupled with limited opening hours mitigates against ease of access.

Advertising Services

Various methods are employed to advertise harm reduction services. Word of mouth was the most frequent means employed within the ERHA. Other popular methods reported elsewhere in the country included health centres, health board directories or brochures and leaflets. Early access to services may be important in minimising risks, therefore consideration should be given to marketing services to ensure new users are accessed promptly.

Education and Training in Harm Reduction

Variations existed in the level and frequency of training in harm reduction. Distinctions were not made between formal and informal training. A number of ERHA respondents referred to ongoing education in the form of team meetings, group discussions and consultations with colleagues. Respondents clarified that this had occurred within the last 6 months. In contrast, outside ERHA, training was reported to have occurred at various times between six months and five years ago, with three respondents reporting training greater than five years ago. The majority of respondents outside ERHA completed addiction studies training.

A wide range of health professionals including doctors, nurses, counsellors and outreach workers were identified as delivering harm reduction services. Considering the profile of staff engaged in harm reduction and the variation in levels of ongoing training, service planners and managers will need to ensure that attending formal educational and skills training of an interdisciplinary nature is a vital component of the harm reduction workers remit.

Links with Other Agencies

Across all Health Boards respondents stated that they have links with GPs, mental health agencies, hospitals, pharmacies, probation officers and voluntary organisations. Some respondents reported links with social workers. Differences emerged in the reporting of links with self-help groups within ERHA and the other regions. ERHA respondents reported formal links with these services whereas informal links were reported elsewhere. Additional services were linked into by ERHA workers including the drug court, prisons, police and Citizens' Advice Bureaus. Communication systems to develop and maintain links and interagency collaboration are recommended.

The Influence of Policies on Practice

Differences in responses emerged across respondents. Within the ERHA, the majority of respondents were positive regarding the translation of operational policies into practice. This contrasts with only two respondents commenting similarly outside of the ERHA. Policies were seen as important in guiding staff decisions and actions and providing protection to both staff and clients.

The development of protocols especially around under-age users and new policies remain a challenge for those outside the ERHA. This finding was echoed by those within the ERHA with half of the ERHA sample reporting that current policies are challenging. Balancing confidentiality and informing parents of under-age users was reported as a challenge to service provision.

There was unanimous agreement across all respondents that service provision departs from service policy. Within the ERHA, the majority of respondents commented that it is necessary to 'bend the rules' while providing a service. Examples of this included helping people to get treatment although they may not be resident in the area and providing extra needles to clients. Outside of the ERHA, it was reported that one service 'unofficially' provides needles, syringes, and condoms.

Further Development of Services

ERHA respondents suggested that resources including the type of programme and opening hours need improvement. Other suggestions included more diverse treatment models such as respite houses, methadone withdrawal, extended mobile services and outreach work and greater inter-agency collaboration. Similarly, respondents outside the ERHA called for an increase in resources including the reduction of waiting lists and the inclusion of more community-focussed outreach services, e.g. to meet the needs of homeless people.

Within the ERHA, half of the respondents expressed the desire that their practice should be continuously updated to reflect current users' needs and trends such as the perceived increase in use of crack cocaine. Some respondents outside the ERHA suggested that there should be clear structures and operational policies supporting NEPs. Community pharmacies and on-site dispensing of methadone were also suggested.

Increase in resources, expansion of services, the development and implementation of relevant up-to-date policies were among the key suggestions made by respondents. These ideas reflect themes found in the current literature.

Legal Concerns Surrounding Harm Reduction Programmes

The main legal issue of concern to respondents was working with under-age users (i.e. under 18 years of age) around issues of consent, confidentiality and methadone provision.

A minority of respondents commented that they may be aware of users dealing. Sometimes this information is not shared outside the service. One report of 'works' provided by the programme being confiscated by An Garda Síochána suggests the need for improved inter-agency communication.

Key Points

- Differences exist between services in the range of drug-taking paraphernalia and the extent of health care advice offered to drug users. Advice to users which includes information about alternative methods of administration is not given by any of the health boards
- Access to services could be improved by extending opening hours, marketing and the introduction of alternative services such as vending machines and community pharmacies. These were suggested by respondents
- Ongoing professional development will guide best practice
- Communication systems and inter-agency collaboration present a challenge to harm reduction workers
- Standardisation of reporting systems and record keeping along with policies and procedural reviews were issues of concern to harm reduction workers
- Extensive research is required on the national spread, activities and the quality of service provision in Irish harm reduction services

Chapter 9
Harm Reduction and Marginalised Groups in Society

Within the drug-using population, groups such as the Homeless, Travellers, Women and Prisoners experience issues particular to their unique needs. In this chapter the reader is presented with information on harm reduction and marginalised groups in Irish society. Particular reference is made to the Homeless and Women. Much national and international research has been conducted in relation to drug-using populations in prisons and is also presented in this chapter.

Homeless Population

The profile of the homeless has changed significantly during the past decade. The number of homeless people in Irish society appears to be steadily increasing. Greater numbers of people are now homeless; the population is younger and includes more females and families (O' Gorman, 2002). In 1990 five homeless households were placed in Bed and Breakfast accommodation. By 1999, this had risen to 1,202 households, which consisted of 2,780 people 1,518 adults and 1,262 children, (Houghton and Hickey, 2000).

While the correlation between drug misuse and homelessness has been noted in a number of research studies, there is little specific evidence as to the extent of drug misuse amongst the homeless population in Ireland (O' Gorman, 2002). Holohan (1997) studied 502 homeless people in Dublin aged over 18, 42% of this sample was under 35, 85% were male and 15% were female. The study found that substance/alcohol abuse was the most frequently-cited cause of homelessness (24%). Lifetime prevalence of illicit drug use was found in 27% of the sample.

The Merchants Quay Project, reporting on the numbers of homeless people availing of treatment, found an increased risk in drug-taking practices within this population (Cox & Lawless, 1999). A total of 49% reported sharing needles and 92% of those sleeping rough inject in public places.

Feeney et al. (2000) studied 171 homeless men dwelling in Dublin. More than half of the study group were between 35-54 years and were found to be alcohol dependent. However, high levels of illicit drug use were also found, with 55% reporting having used drugs. In the younger age group 80% of the 18 – 34 year olds, in comparison to 12% of the 55-plus age group, reported ever having used illicit drugs. This figure is consistent with findings elsewhere that youth is a factor in drug use. Of the group who used illicit drugs in their lifetime, 20% reported ever using cocaine and 18% had ever used heroin. Approximately half were dependent drug users, defined as using every day for two weeks or more in the past 12 months. Almost two thirds of the respondents who reported ever using heroin were dependent users. The sharing of needles was a factor with this group. Feeney et al. (2000) found that of the 12% of homeless men who reported injecting drugs, 67% (N=14) said they had shared needles. This is consistent with Cox and Lawless' (1999) findings on sharing.

A second study from the same period focuses on homeless families in emergency Bed and Breakfast accommodation. Houghton and Hickey (2000) found drug addiction to be the principle factor in becoming homeless in 16% of households from a total of 1,202 households who had become homeless. Drug addiction was cited as a contributing factor in becoming homeless by another 11% of the households. In tandem with the studies above, (Cox & Lawless, 1999 and Feeney et al., 2000),

being younger was significantly associated with homelessness and drug use. Over 38% (n=391) of 18-25 year olds and 26% of 26-40 year olds cited drug addiction and drug-related problems as the primary reason for their homelessness.

Condon (2001) studied the health and dental needs of 234 homeless people in Dublin. A total of 38% of this sample reported having ever taken illicit drugs. Almost one quarter, 24%, reported to injecting drugs, 58% of which said they shared needles. In this study 1% of the sample reported having HIV and 7% (N=14) reported being HCV positive. Screening was offered to participants and 189 of the participants were screened for HCV of which 18% (n=35) tested positive for HCV. Screening positive for HCV is associated with the sharing of paraphernalia for drug use.

As noted above the profile of the homeless is changing. The number of homeless women has been steadily increasing. Smith et al. (2001) studied the health status of 100 homeless women and their children in Dublin. Of the 100 women interviewed, 11% specified addiction problems as the reason for becoming homeless. Almost 45% of respondents were classified as dependent on opiates, defined as using every day for two weeks or more in the previous 12 months. All, bar one, reported being involved in a treatment programme. Heroin was used by 47% of the women in their lifetime, 33% (N=13) of those who reported ever injecting had shared drug-taking paraphernalia. A quarter of this group reported that they were HCV positive and 2% were HIV positive. Almost 100% were involved in a treatment programme indicating that homeless women are able to gain access to services. However, both Smith et al. (2001) and Condon (2001) found that sharing of equipment, and prevalence of HCV in the populations studied, suggests that the range of services for this group may need to be extended.

Greater numbers of people are now homeless, figures for 2000 were up 60% in the rough sleeping count (O' Gorman, 2002). The research evidence suggests a practice of injecting risk behaviour in the homeless population. However, the research indicates that access to services alone does not prevent the sharing of drug-taking paraphernalia and the transmission of HCV. Indications from the research also point to the young homeless as being more likely to use illicit drugs and to practise sharing drug-taking paraphernalia. More research is required in this area to determine innovative strategies for earlier interventions with the homeless. Consideration also needs to be given to the development of appropriate facilities for homeless drug users where access to primary health care can be ensured.

People Involved in Prostitution

There is a lack of published research on drug use and prostitution in Ireland. In the only available study of drug using women in prostitution (The Women's Health Project, 1999), over 84% of the sample reported injecting heroin in the month prior to the study. This group of women are at an increased risk from both drug use and engaging with multiple sexual partners. It is paramount that they have access to appropriate harm reduction services.

Traveller Community

According to the NDS (2001) there is no evidence to suggest that illicit drug use among the Traveller Community is a major issue. However, the NDS (2001) includes Travellers amongst the at-risk groups. At the time of writing this report there was insufficient empirical information to fully assess implications for harm reduction. In May 2003 the NACD, together with Traveller organisations, initiated a nationwide research project amongst Traveller communities to establish the drug issues and challenges facing this vulnerable community.

Prison Services

Relative to the general population, prisoners have high lifetime levels of injecting (Hunt et al., 2003). Injecting drug users are more likely to share injecting equipment while in prison than when they are in the community (Dillon, 2001). The limited availability of drugs within the prison setting creates an environment in which injecting is considered the only acceptable route of administration (Dillon, 2001). Dillon's (2001) study also highlighted that injecting equipment was more difficult to come by in prison and this was a factor in sharing. Since 1992, NEPs within prisons have been increasingly developed in some European countries. Evaluations of these prison NEPs show a reduction in sharing rates and in the acquisition of HIV, HBV and HCV (Dolan et al., 2003). Switzerland, Germany and Spain now have NEPs available in their prisons.

Needle Sharing in German Prisons

Muller, Stark, Guggenmoos-Holzmann et al. (1995) conducted a study of 612 IDUs in Berlin to examine imprisonment as a risk factor for HIV infection. A total of 418 IDUs had a history of imprisonment of which 202 continued to inject while in prison. Interestingly, 152 IDUs started sharing needles while detained. This finding highlights the risk associated with this population. Muller et al. (1995) reported that needle sharing in prison is the most important risk factor for HIV, HCV and HBV transmission. These authors acknowledged that the success in harm reduction techniques in the community might be compromised by situations inside prison. An outcome of their study was the provision of a medical kit containing health information leaflets and a bleach type disinfectant to IDUs in prison. The authors claimed this was unlikely to benefit the IDUs, as time would not be available to them to adequately clean their equipment. Facilities for cleaning equipment are not a sufficient substitute for replacing equipment.

In Germany in 1996, two prisons, Lingen, a men's prison with 230 inmates and Vechta, a women's prison with 170 inmates introduced NEPs as a pilot project (Jacob & Stover, 2000). In Vechta, inmates accessed needles via one of five dispensing machines. In contrast, staff handed out sterile syringes to inmates in Lingen. In both prisons, the number of used needles returned was high although there was no strict one-for-one policy in operation.

The acceptance of the NEP in the women's prison was much greater than in the men's prison. Jacob & Stover (2000) cited various reasons for this including frequent use of the needle dispensing machine and participants positive responses to the project. As a result of the personal contact involved in the manual distribution of sterile equipment, prisoners in Lingen were more reluctant to engage in the uptake of sterile equipment. The different mode of distribution may have been an important factor. Acceptance of the project among prison staff in both prisons was high. The supply of sterile needles and syringes became part of daily routine. Among other benefits, the projects demonstrated an increase in the use of sterile needles along with an improvement in inmates' health status.

Prior to the commencement of the project, a total of 54 inmates had shared needles. After the implementation of the project, four male prisoners reported using a non-sterile needle for their last injection (Jacob & Stover, 2000). Importantly, no increase in drug consumption was observed. The authors concluded that needle sharing is a spontaneous response to the lack of sterile injecting equipment. This pilot project highlights the positive benefits of introducing a harm reduction programme within the prison system.

Scottish Prisons

In a cross-sectional study, Bird, Gore, Hutchinson et al. (1997) aimed to determine the frequency of injecting inside prison and the use of sterile clean needles in the previous four weeks. Two prisons, one in Glasgow and one in Aberdeen were involved in the study. A total of 41% and 37% of inmates in Glasgow and Aberdeen respectively had a history of IDU. Results indicated that 37% of IDU inmates in Glasgow and 58% of IDU inmates in Aberdeen had injected in the previous four weeks while in prison. Although risk factors associated with sharing equipment were not examined in this study, it was noted that IDUs had access to sterilisation tablets in prison. It was reported that the majority of injectors used sterilisation tablets to clean needles and syringes. Bird et al. (1997) concluded that it is paramount that prisoners who inject drugs are enabled to do so in a safe manner. They acknowledged the need for access to other harm reduction measures such as needle exchange while in prison.

Swiss Prisons

In 1994, a pilot project on the prevention of drug use and transmission of HIV was established in Hindlebank, a Swiss prison for women (Nelles, Fuhrer, Hirsbrunner & Harding, 1998). This project consisted of lectures, socio-medical counselling, and distribution of condoms and syringes by exchange dispensers. This project was evaluated primarily using structured personal interviews with inmates prior to the introduction of the programme and at three-monthly intervals on three occasions following its implementation. A total of 161 inmates took part with at least 85% engaging in one interview. Sharing of syringes amongst inmates significantly reduced during the project. At the beginning of the project 8 of 19 IDUs reported sharing syringes the previous month with others in prison. On completion, only one woman reported sharing injecting equipment while in prison.

This study suggests that the availability of clean injection equipment via automated dispensers is necessary to reduce needle sharing in prison. As in other studies (e.g. Jacob & Stover, 2000), there is evidence that drug consumption did not increase during the intervention. Nelles et al. (1998) confirmed the relationship between continuing drug use in prison and the prevalence of infectious diseases. The authors demonstrated that syringe distribution in prison was both feasible and successful and highlights the need for effective prevention measures within prisons (Nelles et al., 1998).

Spanish Prisons

Until the 1990s Spain had policies based on abstinence. According to Rinken and Romero-Vallecillos (2002) they also had the higher rate of HIV infection amongst the IDUs population in Europe. Significant reductions in HIV have been reported since the introduction of extensive harm reduction policies between 1992 and 1994 (Hernández-Aguado et al., 1999). HIV prevalence amongst Spanish prisoners has declined from 23% in 1996 to 17% in 2001, a reduction of 6 percent in 5 years (Hunt et al., 2003). Hunt et al. (2003) notes that this is more likely to be attributable to the earlier introduction of methadone programmes along with education, counselling and condom distribution. In effect, a comprehensive harm reduction programme in which NEPs in prisons are one of a number of strategies employed.

Misuse of Drugs by the Irish Prison Population

Drug consumption in prison and its implications are a major problem within the prison system (Jacob & Stover, 2000). Allwright et al. (1999) found 52% of a national sample of prisoners reported a history of opiate use, and 43% reported a history of injecting drug use. O' Mahony (1997) states that the problem of drug misuse for prison systems is impeded by a lack of research, and, where research exists, by definitional ambiguities and confusions. The research does not always distinguish between cannabis, cocaine and opiate users. O' Mahony (1997) compares the situation in Mountjoy with the US Survey of State Prison Inmates and finds that the incident of opiate use in the Mountjoy sample (66%) is three times higher than in the US State prison system (25%). However, it is important to take into account that Mountjoy, one Irish Prison, which has a concentration of drug users, is being compared to the entire US State prison system. Those who inject in prison also report increased rates of borrowing needles and syringes (Stark et al., 1995).

Irish Prisons

Both Long, Allwright, Barry et al. (2001) and Allwright, Bradley, Long et al. (2001) aimed to determine the prevalence of antibodies to HBV core antigen, HCV core antigen and HIV in the Irish prison population and to examine risk factors for infection.

The survey findings of the committal study (Long et al., 2001), which examined those entering Irish prisons, echo the general findings of Allwright et al. (2001) who used a sample of those already within the Irish prison system (census study). In the Long et al. study (2001), all newly-detained prisoners during a 3-week time period in 5 out of the 7 Irish prisons, completed an anonymous questionnaire

and provided an oral fluid sample for analysis. Over half the IDUs reported sharing needles in prison with almost a fifth reporting starting their injecting habit there. Increasing time spent in prison in the preceding 10 years and a history of injecting drug use were significant predictors of HCV antibodies (Long et al., 2001). IDU was the most important risk factor for HCV, with injectors who reported sharing needles in prison being more likely to test positive (Long et al., 2001; Allwright et al., 2001).

Being in prison is associated with a move from one route of administration to another, e.g. smoking to injecting and it has influenced the risk behaviour of prisoners in relation to the spread of blood-borne diseases such as hepatitis and HIV (Dillon 2001). This shift in the route of administration was attributed to the nature of drug use in prison. Dillon (2001) reported that the supply of drugs is limited, therefore, they are taken by the perceived most efficient route. By 'efficient' it was meant that the greatest number of prisoners should be able to use, to its maximum effect, the limited quantity of heroin available.

Although the prevalence of antibodies to HCV was 22% (6% HBV; 2% HIV), Long et al. (2001) concluded that injecting drug use and associated infections, particularly HCV, are endemic within Irish prisons. IDU was the most important predictor of antibodies to HBV and HCV.

Prisoners who had previously been incarcerated were more likely to test positive for HIV, HBV and HCV compared to prisoners serving their first sentence (Long et al., 2001). The prevalence of each of these three infections was significantly higher in women than in men. The proportion of women prisoners who reported injecting drugs was higher than men. Allwright et al. (2001) supported this finding and reported that women were more likely than men to report smoking heroin in the past year. This suggests that women drug users in prison are an 'at risk group' needing appropriate and necessary harm reduction programmes.

It must be considered that both these studies are cross-sectional in nature, thus causal conclusions cannot be drawn. Another limitation noted by Long et al. (2001) is that there is an 80% sensitivity of the antibody test, the prevalence of HCV antibodies in their survey therefore, is likely to be an underestimate. True prevalence could be as high as 90% in Irish prisons.

Allwright et al. (2001) confirm the high rates of IDU and sharing of equipment in prison. They conclude that policy makers must ensure that a prison sentence does not increase an individual's health risks. The rate of HIV among Irish prisoners is more than 10 times greater than in the general population, the rate of HCV in excess of 100 times (Lines, 1996).

Key Points

- Research indicates a practice of injecting risk behaviour among the homeless population who use drugs
- Women in prostitution are an at risk group for HIV, HBV and HCV infection from both injecting risk behaviours and having multiple partners
- There is evidence that drug consumption does not rise in prisons following the introduction of NEPs
- Those who inject in prison report increased rates of borrowing needles and syringes, which is considered to be the most important risk factor in the transmission of HIV, HCV and HBV in prison
- Irish studies show that blood-borne infections are more common in IDUs who were previously in prison than those who had no time in prison
- Women drug users in prison are an at risk group who would benefit from appropriate and necessary harm reduction programmes
- HIV and HCV are significantly higher among prisoners in Ireland than in the general population
- As imprisonment leads to high-risk drug taking practices, there is a need for extended harm reduction measures within Irish prisons

Chapter 10
Legal Issues

Services providing harm reduction programmes need to be mindful of national and international laws and treaties, as the range of services that can operate in a State is controlled by national legislation. This chapter outlines the relevant Irish law and international treaties that govern the supply, preparation and consumption of controlled drugs. Direct reference is made to the Misuse of Drugs Act (1977), The Misuse of Drugs Regulations (1988), the United Nations Single Convention on Narcotic Drugs (1961), and the International Narcotic Control Board (INCB) annual report (2002).

Over the last 80 years, a worldwide system for control of drugs abuse has developed gradually through the adoption of a series of international treaties. The important multilateral conventions currently in force include the Single Convention on Narcotic Drugs, 1961, amended by the 1972 Protocol, the Convention on Psychotropic Substances, 1971, adopted in 1988, and the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychoactive Substances. Each successive treaty has led to complementary regulations and advances in international law. From their outset, the basic aim of the international drug control treaties has been to limit the use of drugs to medical and scientific purposes only (INCB 2003).

This report is concerned with the range of harm reduction measures aimed at minimising sharing of equipment used to administer drugs. The drugs heroin and cocaine, as outlined above, are frequently smoked or injected thus requiring equipment for their administration. Harm reduction measures range from communicating with drug misusers to the provision of equipment to administer drugs, and, as described in Chapter 5, supervised consumption rooms. The prescription and provision of heroin for consumption is argued by some to be a harm reduction measure. However, where such prescription and provision has taken place, (the United Kingdom, Switzerland and the Netherlands) it has clearly been described as treatment and/or research (Ali et al., 1998, Hall, 1999, Uchtenhagen et al., 1999, Van Den Brink et al., 1999, Zador, 2001 & Hunt et al., 2003). The INCB (2002) annual report notes the evaluation of the heroin maintenance programme undertaken by the Government of the Netherlands, which highlights both the advantages and disadvantages of such programmes. The Board reiterates its reservations from previous years (INCB 2003, 2002, 2001, 1999), that the evidence is not convincing even in cases where methadone treatment had persistently failed, that the medical prescription of heroin generally leads to better results than further methadone treatment. In view of the conclusion of the External Panel and mindful of the responsibilities according to it in the international drug control treaties, the Board remains concerned over the Swiss heroin programme and policy of heroin prescription. The Board does not encourage other governments to allow heroin to be prescribed to opiate addicts (INCB 1999). Heroin provision is not part of the harm reduction approach in Ireland.

Drug Schedules

The list of Narcotic drugs under international control (Yellow list 2002) includes cocaine (methyl ester of benzoylecgonine), heroin (diacetylmorphine) and methadone (6-diemethylamino-4, 4-diphenyl-3-heptanone). In Irish law, cocaine, diamorphine (pharmaceutical heroin) and methadone, are listed as Schedule II drugs. The Misuse of Drugs Act 1977 and the Misuse of Drugs Regulations 1988 provide for a wide range of controls over drugs that have the potential to be misused. They include controls

relating to importation, exportation, cultivation, licensing, administration, supply, record keeping, prescription writing, destruction and safe custody (Misuse of Drugs Act 1997, Misuse of Drugs Regulations 1988, Moran et al., 2001).

Production and Administration of Controlled Drugs

Part II of the Misuse of Drugs Regulations (1988) states that a person shall not produce a controlled drug, supply or offer to supply a controlled drug, or import or export a controlled drug. The regulations make provision for the Minister to grant a licence to supply, offer to supply, import, export or have in his possession any controlled drug to which the licence relates.

Administration of Schedule II drugs is regulated under Section 6 of the Misuse of Drugs Regulations (1998), and permits registered medical practitioners or registered dentists or any person in accordance with their directions to administer Schedule II drugs to another person.

Practitioners and pharmacists may, when acting in their professional capacity, supply Schedule II drugs to any person who may lawfully have the drug in his possession.

Possession of Controlled Drugs

Part III of the regulations allows for possession of controlled drugs for administration for medical, dental or veterinary proposes, in accordance with the direction of a practitioner. Other general authorities are also allowed to keep controlled drugs in their possession when it relates to conducting their work. These authorities include, a member of the Garda Síochána, a Customs and Excise Officer, a person authorised in writing by the Minister acting in the course of his duties (such as a postal worker), a person engaged in work in a laboratory, a person engaged in the business of carrier, when acting bona fide in the course of that business, or a person engaged in conveying the drug to a person authorised by the regulations to have it in his possession.

Regulations in Relation to Preparing and Consuming Controlled Drugs

Section 16 of the Misuse of Drugs Act (1997) prohibits people from smoking or otherwise using prepared opium. It also prohibits the frequenting of a place used for the purpose of smoking or otherwise using prepared opium. Subsection 16.c. (i) prohibits a person from having in their possession any pipes or other utensils made or adapted for use with the smoking of opium (Misuse of Drugs Act 1997). The Misuse of Drugs Act (1997) also set out in law a prohibition on the occupiers and or managers of any land, vehicle or vessel from permitting or tolerating the preparation and/or smoking of opium, cannabis or a controlled drug. These restrictions in Irish law would clearly prevent any organisation from opening or operating a drug consumption room where drug users could prepare and consume their illicit drugs.

Establishing drug-injecting rooms, where drug abusers can inject drugs that they have acquired from illicit sources, is contrary to international drug control treaties (INCB 2002). The INCB (2002) criticised the opening of a drug consumption room in Switzerland in 2002 on the basis that the facility was not opened with the claim that it was necessary to reduce risks to the general public and to illicit drug users. Drug injecting rooms (or any other similar outlets established in some developing countries) might even facilitate drug abuse, are contrary to international drug control treaties and interfere with obligations of law enforcement authorities (INCB 2002). Similarly the Board maintains its opposition, expressed in its report of 2001 on the establishment in Australia of a drug injecting room, and regrets that the project has been extended (INCB 2002).

Key Points

- International treaties exist to limit the use of drugs to medical and scientific purposes only
- National legislation outlines a number of controls on the prescription, possession and consumption of controlled drugs
- There is scope in Irish law for the prescription of Schedule II drugs by medical practitioners and other defined agents
- A licence is required to import, export or manufacture a Schedule II drug
- The INCB has criticised drug consumption rooms in both Australia and Switzerland
- Under current Irish law it is not permissible to legally operate a drug-consumption facility

Chapter 11
Conclusions

Harm reduction strategies operating nationally and internationally have been reviewed in this report, with an emphasis on the sharing of drug-taking paraphernalia, the transmission of blood-borne disease and the needs of particularly marginalised groups. Given the range and extent of literature reviewed in this report, and the contribution made by the exploratory empirical research, it is clear that this critical analysis of harm reduction approaches has the potential to inform practice in Irish drugs' services.

Harm reduction efforts focus on minimising the personal and social harm associated with drug use and the spread of blood-borne disease. International trends in harm reduction have become established during the past three decades. These trends are reflected in Irish Government policy since 1992 and clearly inform the National Drug Strategy (2001-2008).

Harm reduction programmes operate in a range of settings in Ireland, including fixed sites, mobile units and outreach settings. Harm reduction programmes normally draw on a knowledge and means model of behaviour change, including ongoing treatment for drug misusers.

The international research reviewed indicates that treatment and prevention interventions are more successful in containing the spread of HIV than containing HCV, and that the duration of drug misuse is generally associated with acquiring HCV among IDUs. Where comprehensive harm reduction programmes exist, lower rates of infection are reported suggesting that harm reduction has a role in managing and limiting some of the negative outcomes associated with sustained drug misuse.

High levels of unsafe injecting practice have been found among young Irish IDUs, which helps to explain the early acquisition of HCV by IDUs in Dublin. Understanding this pattern requires an analysis of trends elsewhere in borrowing equipment, particularly in young populations, which suggests that messages about managing high-risk behaviour are not being transmitted effectively to young IDUs. A number of factors may be influencing this, including the accessibility of services (e.g. location, opening hours), issues around consent, the strategies used to convey harm reduction messages, and the preparation of staff.

The research indicates that ease of access to services is a factor in the transmission of blood-borne infections. IDUs frequently report sharing needles and syringes because of the perceived difficulty in acquiring clean equipment. It is also noteworthy that substantial variation exists in the local availability and accessibility of services in Ireland.

All of the routes of drug administration that require the use of equipment increase the risk of the transmission of HIV and HCV, particularly when equipment is shared. NEPs have been successful in reducing the risk of sharing needles and syringes, but have not made a significant impact on the sharing of other injecting paraphernalia. It is evident from the literature reviewed that sharing drug-taking paraphernalia is a common practice. This poses a major risk to the health and well-being of the user and has implications for the spread of diseases including HIV, HBV and HCV. Contaminated spoons, water or solvents, filters, and pipes may spread bacterial and viral infections. Spoons are the most frequently shared piece of injecting paraphernalia. The exploratory research indicates that drug services differ in the range of paraphernalia that is offered to IDUs.

Another phenomenon identified in the literature that influences risk-taking behaviour in relation to injecting drugs is the change in trends of drug use that can occur relatively quickly. These changes require users to administer their drugs differently.

Public concerns about harm reduction as an approach to the management of problem drug use appears to centre on the legalisation of illicit substances, criminal activity associated with illicit drug use and risks to public health from contact with used drug-taking paraphernalia. These concerns have been influential in the establishment of harm reduction programmes both nationally and internationally. Despite fears to the contrary, there is evidence that NEPs are effective in preventing HIV infection without being associated with a rise in drug use.

The factors most frequently associated with the sharing of equipment include youth, a shorter injecting history and being involved in a sexual relationship with other IDUs. The research indicates that young injectors are not receiving the harm reduction message of safe injecting practices. Unprotected sexual activity by those who are sharing paraphernalia needs to be addressed within a harm reduction programme.

Intravenous drug use often occurs in locations with limited accessibility to NEPs. Internationally, supervised consumption rooms have been introduced in a number of sites with a purpose of responding to high levels of overdose and to reduce the nuisance from street drug use. The goals associated with the introduction of supervised consumption rooms include the reduction of the incidence of blood-borne disease transmission, improvements in the general health of IDUs and increased contact with appropriate primary health care and social services. Supervised consumption rooms are a way of increasing contact with the most marginalized drug users. However, the research to date on the effectiveness of drug consumption rooms is inconclusive as to their effectiveness as a harm reduction strategy. It is noteworthy that the introduction of supervised consumption rooms in Ireland would require changes in legislation.

Heroin provision has also been trialed internationally and is considered part of the harm reduction strategy in some countries. There is a limited amount of research to support the introduction of this strategy. The limited trials that have been conducted to date do not show that heroin provision alone provides significant harm reduction outcomes for drug misusers.

Problem drug users are a marginalised group in society. Within this group there are subsets of users with particular needs, including people who are homeless, young people, women, sex workers and prisoners. Research with people who are homeless indicates a relatively high rate of injecting risk behaviour amongst those who use drugs. People in prostitution are at risk both from injecting risk behaviour and having multiple partners. All of these groups have particular needs that influence the level of risk they encounter, and the evidence supports developing a rationale for providing tailored services to each group.

Needle and syringe sharing in prison has proved to be the most important risk factor for contracting HIV, HCV and HBV. HIV and HCV are significantly higher among prisoners in Ireland than in the general population. Those who inject in prison also report high rates of borrowing. Irish studies show that blood-borne infections were more common among drug injectors who had previously been in prison than injectors who had not. There are no harm reduction services in prisons in Ireland although treatment through the provision of methadone is now available in many prisons.

Minimising the sharing of equipment used to administer drugs is clearly established in national and international research as reducing risks to drug users. There is no evidence to suggest that introduction of harm reduction approaches increases the use of illicit drugs. The evidence suggests that harm reduction programmes are effective in reducing costs both fiscal and social in countries where harm reduction programmes are established.

Appendix A

Questionnaire for Irish Service Providers

Good Morning/Evening

I am _____

As part of a research team in Dublin City University we are currently conducting a review of harm reduction aimed at minimising sharing of equipment used to administer drugs.

The National Advisory Committee on Drugs (NACD) funds this project.

To date we have conducted a literature review, which has highlighted important issues in harm reduction.

In order to complete this project and give it an Irish context we are now seeking information from service providers nationally about any harm reduction services they operate.

I would be grateful if you could answer some questions about harm reduction in your service. (Or put me in contact with someone in the service who could answer the questions.)

To answer all the questions takes between 20 and 30 minutes.

Is this a convenient time for you? If not, could you suggest a suitable time that I could ring back.

Ask questions.

Thank you for you help and support.

Goodbye.

A harm reduction approach to drug addiction focuses on reducing the harm that substance misusers do to themselves and to their families. A harm reduction approach aims to reduce the transmission of HIV, hepatitis and other infectious diseases and to maximise service users' health.

1. What is your role in the service?

2. What addictions does your service treat?

3. Does your service offer a harm reduction programme?

Yes ☐ No ☐

4. What is the purpose of this harm reduction programme?

5. What harm reduction programme does your service offer?

- Needle exchange ☐
- Methadone maintenance ☐ (high ☐ medium ☐ low ☐ threshold)
- Replacement drugs ☐ please specify _____
- Needles ☐
- Syringes ☐
- One-for-one needle exchange ☐
- Payment for sterile needles/syringes ☐
- Alcohol wipes ☐
- Sterile water ☐
- Citric acid ☐
- Filters ☐
- Spoons ☐
- Pipes ☐
- Does it promote safety in sharing other injection paraphernalia? ☐
- Is it monitored? ☐
- Does it have specific targets (i.e. particular groups of drug users)?

_____

_____

_____

- Are there specific areas of harm reduction addressed, such as
  - HIV ☐
  - Hep C ☐
  - Hep B ☐
  - Other ☐ please specify _____
- Does harm reduction include specific issues such as
  - Choosing, rotating and caring for injection sites ☐
  - Demonstration of safe injection sites ☐
  - Discussion on specific injecting techniques (booting, frontloading) ☐
  - Is there a formal record made to confirm what harm reduction advice and skills training the user has received ☐
- Please describe any other harm reduction strategies that are employed in your service

_____

_____

_____

6. Can you please describe this harm reduction service in terms of
   - Opening hours _____
   - Who can access this service
     - i. Referrals only ☐
     - ii. Walk in off street ☐
     - iii. Registered user ☐
     - iv. Other ☐ please specify _____
   - How and where is this service advertised? _____
   - Location (outreach)? _____

7. Who are the various staff that work on the harm reduction programme?

_____

_____

_____

8. What training have you received in harm reduction?

_____

_____

_____

- When did this training occur?
  - Less than 6 months ago ☐
  - Between 6-12 months ago ☐
  - Between 1-3 years ago ☐
  - Between 3-5 years ago ☐
  - Greater than 5 years ago ☐ please specify _____

9. What link {formal (F) or informal (I)} do you have with other agencies?

GPs	☐ F	☐ I
Mental health agencies	☐ F	☐ I
Hospitals	☐ F	☐ I
Pharmacies	☐ F	☐ I
Prisons	☐ F	☐ I
Probation officers	☐ F	☐ I
Voluntary organisations	☐ F	☐ I
Drug courts	☐ F	☐ I
Self-help groups	☐ F	☐ I
Other	☐ F	☐ I _____

10. In your opinion, how do your operational policies/guidelines translate into practice?

11. What challenges if any does your service face in implementing service policy/guidelines?

12. In what ways (if any) does service provision depart from service policy/guidelines?

13. How can this service be developed further?

14. Are you aware if there is specific funding for the harm reduction programme in your service?

15. Are there any legal issues surrounding the implementation and/or running of this harm reduction programme that may impact on its effectiveness?

16. Any other comments?

Appendix B

NACD Treatment Subcommittee Membership

Dr Eamon Keenan, Chair, Consultant Psychiatrist

Dr Joe Barry, ERHA, Public Health Specialist

Mr Liam O'Brien, Community Representative

Mr Willie Collins, Regional Health Boards' Representative

Dr Ide Delargy, ICGP

Ms Frances Nangle Connor, Irish Prisons Authority

Dr Hamish Sinclair, Drug Misuse Research Division, Health Research Board

Mr David Moloney, Department of Health and Children

Mr Tony Geoghegan, Irish Association of Addiction and Alcohol Counsellors

Dr Derval Howley, National Drug Strategy Team

Mr John Kelly, Department of Community Rural & Gaeltacht Affairs

Mr David Keenan, Voluntary Drug Treatment Network (Resigned Nov 2003)

Ms Mairéad Lyons, Director, NACD

Ms Aileen O'Gorman, Research Officer, NACD

Mr Muiris O'Conchuir and Mr Alan Gaffney, former and current Secretary to the Committee respectively.

Appendix C

Harm Reduction Research Advisory Group

Dr Joe Barry

Dr Derval Howley

Ms Aileen O'Gorman

Ms Mairéad Lyons

Project Team Dublin City University

Gerard Moore

Philomena McCarthy

Padraig MacNeela

Liam MacGabhann

Mark Philbin

Denise Proudfoot

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NDP
NATIONAL DEVELOPMENT PLAN

Your Plan - Your Future

NACD
National Advisory
Committee on Drugs

3rd Floor
Shelbourne House
Shelbourne Road
Ballsbridge
Dublin 4

Tel: 01 667 0760

Web: www.nacd.ie
email: info@nacd.ie