

The Natural History of Injecting Drug Use in a Dublin Community (1985-1995)

A thesis for the Doctor of Medicine degree submitted by:

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Declaration:

I declare that this thesis has not been submitted for a degree in any other University, and that it is entirely my own work. I agree that the library may lend or copy this thesis if so requested.

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SUMMARY

The number of drug users within Ireland and the European Union is increasing. It is estimated that there are about 14 thousand drug users in Ireland and a total of between 1.5 and 2 million within the European Union. Drug related AIDS cases account for 50% of all AIDS cases in Europe. The high prevalence of HIV infection in the drug using population and the increasing numbers using illicit drugs has posed many medical and psychosocial problems not only for individuals, but also for their families and communities especially so over the last two decades.

There is a paucity of community based longitudinal studies of drug users, the study described in this thesis being the first one undertaken in Ireland. The study described here is community based; a sustained attempt was made to identify all the drug users within one district electoral area and to interview them, and longitudinal as the cohort was first interviewed in 1985 and again in 1995. Further this cohort was identified and interviewed prior to HIV antibody testing being available to them and so brings a unique perspective to the experience of HIV infection in drug users in the Irish context. Finally the study was carried out by a general practitioner who has worked within and served the target community continuously since 1978.

This thesis puts opiate use into a historical, geographic and demographic context and then outlines the impact of the emergence of HIV infection on the general population and in particular on injecting drug users. As the study is community based it is important to understand the history and development of the target community and finally as the work was undertaken by a general practitioner it is necessary to place the study in the context of the job definition of the general practitioner. The study then details the experience of a cohort of identified drug users from that community with various drugs, especially opiates, exposure to blood borne viruses, their continuing risk behaviours, impoverished background, experience of the prison system and their levels of morbidity and mortality. The method used relies on the testimony of the interviewed drug users; this could be seen as a potential source of weakness however there are separate clinical records from different agencies to support the main findings.

A cohort of injecting drug users was established in 1985 by identifying and interviewing as many as possible of the drug users within the target district electoral division. One hundred and three persons were identified of whom 82 (80%) were interviewed. All 82 respondents admitted to regular heroin use by injection. A study of non-responders shows that 20 of the 21 had attended the only Drug Treatment Centre in Dublin City centre, and are similar to those interviewed in socio-demographic characteristics, age range and drug use history. The 1985 interview established the basic family, educational, social, medical and drug use history of the cohort. Those interviewed show all the stigmata of deprivation, that is they come from large families (mean size of 8.2 siblings), many had left formal education early (n=32, 39%) and there were high levels of paternal unemployment (34%). Further the cohort members had little work experience (n=10, 12%). The age of starting heroin use ranged from as young as 10 years up to 26 years, the mean age being 16 years. By 1989 most had attended the only drug treatment service in the state (n=76). They had suffered other medical problems as consequence of injecting heroin use, such as Hepatitis B infection (n=55, 67%), skin abscesses (n=43, 52%), overdoses (n=21, 26%) asthma, epilepsy, sexually transmitted diseases and depression. In total 28 (34%) of the cohort had a total of 52 admissions to hospital for treatment by 1985. Sixty-three (77%) had served a prison sentence

Twenty-seven (33%) of the cohort were dead by the 1995 phase of the study. Fifty of the remaining 55 were re-interviewed and death certificates were reviewed on all 27 who had died. By 1995 51(62%) of the cohort had tested sero-positive for HIV antibodies and 57 (70%) had evidence of Hepatitis B infection but only 28 were tested for Hepatitis C and of these 27 (93%) were positive. The majority of those who tested HIV sero-positive had not altered their drug habit significantly, although most adopted some harm minimisation strategies, such as needle exchange. Only a minority of the group altered their sexual behaviours.

On comparing this cohort to another one of Dublin based drug users, derived from the records of the National Drug Treatment Centre, there are some differences. Chiefly the study cohort is slightly older and started drug use earlier and therefore encountered problems earlier. When comparing this cohort with others from the same area and same background, but who do not have a history of drug use by 1985, the outstanding

difference is the high level of mortality within the drug-using cohort, which is clearly related to their drug use.

As can be seen there is a high level of mortality and morbidity in this cohort of drug users, which is closely associated with, but not exclusive to, HIV infection. Problem drug use is found in the most marginalised and deprived areas of Dublin City; it is a social problem with medical sequelae. It is probable that there are other areas of the city with a concentration of older drug users with as high levels of HIV infection. Injecting drug use has wrought a high price on the individuals who first started drug use in the early 1980's. Whilst the health services have latterly begun to make an impact on the medical care of drug users they have made little impact on the underlying problems of social exclusion, inequity and inequality which have contributed to the high levels of drug taking in the more deprived communities of Dublin.

Chapter 1

INTRODUCTION

“All countries are affected by the devastating consequences of drug abuse and illicit trafficking; adverse effects on health; an upsurge in crime, violence and corruption; the draining of human, natural and financial resources that might otherwise be used for social and economic development; the destruction of individuals, families and communities; and the undermining of political, social and economic structures.”

United Nations 1998: Declaration on the guiding principles of drug demand reduction.

The problems caused by illicit drug use to individuals, families and their communities are now greater than at any time in recent history. (United Nations 1998, European Communities 1997) The growth of illicit drug use, especially by injection, in the last twenty years has been described as an ‘epidemic’, further it is estimated that there are at least 5 million illicit injecting drug users world wide and that this number is growing. (Des Jarlais 1998, McGregor S. 1989, Mann and Tarantola 1996) There are now 121 countries in which this type of drug use has been reported. (Des Jarlais et al 1996). This is especially visible in the wealthier industrialised societies, more so in the last twenty years, however there is increasing evidence of an emerging drug problem in South East Asia, India, Southern China and Eastern Europe. (Robertson R. 1998) Societies through their judicial, health and other government services have adopted different and various strategies to address the problems caused by this type of illegal drug use, with little success. (Des Jarlais et al 1996, Robertson R. 1998)

The advent of the HIV/AIDS epidemic in the early 1980’s also caused major difficulties for societies around the globe. It caused economic devastation in some nations and challenged others to recognise behaviours, which many of its people find offensive, and in doing so to put into place services that were acceptable and accessible to persons who acquired infection through such behaviours. (Koop E 1998, Institute of Medicine 1988) Those countries affected early in the epidemic currently carry the most serious economic impacts. In many countries, particularly Eastern Europe, South America and Asia, the full impact has yet to be felt, but will be, as the incubation period expires and spread remains high. (O’Kelly F. 1998)

Thus the combination of HIV infection with problem drug use in a sizeable proportion of its population has posed particular public health problems for many communities. In addressing these important health problems not only have the health services been forced to change and embrace new strategies, but also welfare services and society in general have also had to adapt. This process of adaptation can be likened to the stages of a grief reaction. First there is denial that this could happen in our own communities, then anger at certain minority groups, especially when their behaviours are outside of the 'accepted' norm. Thirdly there is blame, blame levelled at the health and other governmental services for not anticipating the problem, or for not supplying services quickly enough, and finally acceptance that this problem must be addressed in a comprehensive, professional and humane way. This acceptance allows for the provision of accessible and acceptable treatment for the individual in need of such treatment, whilst minimising the spread of HIV infection, (ibid).

There are between 1.5 and 2 million drug users within the European Union and it is accepted that this is an underestimation (Office Journal of the European Communities 1995) Approximately sixty-eight thousand AIDS cases in Europe whose principal mode of infection is injecting drug use. (Lomier M. 1991) This represents a significant public health problem in that there is a large pool of a serious infectious disease in a significant population many of who are not amenable to traditional health care strategies. HIV/AIDS in the injecting drug using population could be said to be a disease of relative affluence in that it has been a feature of the wealthier industrialised nations. However the infected injecting drug users are found amongst the poorest within those societies, therefore it is said to be a disease of poverty within an affluent society (ibid). Recent reports of the spread of HIV by Injecting Drug Users in Russia and India has begun to challenge this concept (UN AIDS 1996).

Ireland

In 1972 Ireland became a member of the Common Market that later became the European Economic Community, and is now the European Union. This act heralded an era of unprecedented economic development during which time Ireland has moved from being one of the poorer countries of Western Europe to one enjoying relative prosperity. It is now a dynamic more self-assured economy, a "Celtic tiger" economy, with a per capita income, which matches the European average. All the economic

forecasts, both local and international, suggest that in the short to medium term the economy will continue to expand. (The Economist 1997)

Alongside this rising prosperity major social change has also been taking place. Whilst Ireland is still largely dependant on agriculture there is an expanding and increasingly important technological industrial base, which is accelerating the drift in population from rural areas to the towns and cities. The Roman Catholic Church is losing its once unquestioned dominant position in Irish society, the old more certain but stifling conservatism has given way to a new dynamic but less sure secular liberalism. These changes have been especially visible in the last decade and have given rise to social tensions between groupings of differing ideologies and ages within the community as the benefits of this developing economy have been unevenly distributed. (Crowley E., MacLaughlin J. 1997).

Ireland's history with illicit drug use has taken place against the backdrop of these changes. Problems with illicit opiate use, injecting drug use, first became apparent to the general public around 1979. It is known that there were at least 4,865 heroin users in the city of Dublin before 1996, a city with a population of just over one million people (Moran R. et al 1996). This figure was accepted by all that work in the field to be a definite underestimation of the true level of the real problem. In 1998 Commiskey reported the first attempt to measure the prevalence of opiate use in Ireland This was a capture-recapture estimate, based on three 1996 data sets: methadone treatment list, acute hospital discharges and police data (Commiskey 1998). Commiskey estimated that the total number of opiate users was 13,460 (95% confidence interval 12,037-15,306). Illicit heroin use has been confined to Dublin until recent times, but increasingly there is evidence of such drug use outside of the capital city (Moran R. et al 1996). Heroin causes major social and medical problems to the individual users, their families, and beyond them to the wider society. Its use has become a major social and political issue and the focus for much judicial, medical and social initiatives in the last few years. (Task Force Report 1996 and 1997).

The core of the thesis examines the experience of a cohort of injecting opiate users identified in one small community, the Merchant's Quay F Ward in Dublin's inner city, over a sixteen-year period from 1979 to 1995. It describes the natural history of injecting drug use in the cohort, which was first identified and interviewed in 1985, and then followed over the next decade and re-interviewed in 1995. The experience

of this cohort with injecting opiate use and the consequences of such use is compared with two groups, the first being a random sample of all drug users with a Dublin address, other than in Merchant's Quay F, who were known to the drug treatment services in 1985. The second group comprises all the people from the Merchant's Quay F area, except those in the original cohort but in the same age range, who were registered patients in the authors practice in 1985. The study provides a unique insight into the consequences of long term opiate drug use and HIV infection in the Irish context, and will inform the future development of both HIV and drug services in the city.

In order to place this study in context, that is a historic, geographic, demographic and social context, it is first necessary to relate the history of opiate use, how its use became to be viewed as a problem by society and the consequences of this view. (*Chapter 2*) Secondly it is important to describe the history of the Human Immuno-deficiency Virus (HIV) epidemic with special reference to injection drug users. (*Chapter 3*) Thirdly it is necessary to describe the historical, social and physical characteristics of the area of Dublin city (Merchant's Quay F) from where this cohort emanated. (*Chapter 4*) This chapter also reviews the 1985 study that describes the origin of the cohort. The following chapter reviews research methods used in problem drug use studies in the major centres around the world, then reviews the research undertaken in Ireland and discusses the need for the present study. (*Chapter 5*) The next two chapters describe the aims, methods and results of the study. (*Chapters 6 & 7*). The strengths and weaknesses of the thesis are discussed as well as its implications for future service provision and research. (*Chapter 8*) Finally the main conclusions are presented with a commentary (*Chapter 9*).

Chapter 2

OPIATE USE THROUGHOUT HISTORY

“Among the remedies it has pleased Almighty God to give to man to relieve his suffering, none is so universal and so efficacious as opium.”

(Thomas Sydenham, Physician. 1680)

Since the dawn of time man has used various substances, derived from plants, to alter his consciousness, that is to use these substances as intoxicants for pleasurable purposes and as medical remedies to relieve pain and modify suffering. Opium was probably the first of these substances and has been used since prehistoric times, predating the discovery of alcohol which requires a chemical reaction, fermentation, to produce (Booth M.).

In his address to the New York Academy of Science in 1957 Aldous Huxley spoke of the remains of poppy heads being found in Neolithic sites in Switzerland and stated that:

“Stone-Age man had discovered the techniques of self-transcendence through drugs. There were dope addicts before there were farmers.” (Huxley A.)

Opium is derived from the juice of the unripened seedpod of the opium poppy, *Papaver Somniferum* and it forms a dark brown viscous substance on contact with the air eventually drying to a powder. The powder is made up of various substances; the active ingredients being its alkaloids, of which there are over fifty. The most active of the alkaloids is morphine, which alkaloid is about 10% of the opium by weight; this varies from 4 to 21% according to the country of origin of the opium plant. Other alkaloids are noscrepine, papaverine and codeine. In order to prepare it for use the resinous opium is “cooked” that is it is added to boiling water then filtered and reduced down until all that remains is a thick brown paste. The paste is now ready to smoke or to eat; it can also be dissolved in a variety of liquids and taken orally (Laurence D.I 973).

Opium has been used in India, for over 1500 years, mainly in its raw form and taken by mouth. In Turkey opium’s bitterness was disguised by nutmeg and other spices and was regarded as both a medicine and an aphrodisiac. In Europe opium was mixed with wine, which was sometimes sweetened with honey or sugar. Smoking opium was more common in China, the East Indies and the eastern seaboard of Indo-China. Smoking was illegal in certain countries, notably in the Middle East, at this time (Berridge V 1984 & 1996).

Opium was probably first produced for its pleasurable and medicinal properties in the eastern parts of Europe, around the Black Sea and the Balkans, the knowledge of its properties spreading from here to other parts of Europe. The opium poppy was being cultivated in Mesopotamia around 3400 BC and was brought from there to Egypt, so that by the year 2000 BC opium was known in Europe, the Middle East and North Africa. Opium particles were found in the tomb of Cha, one of the ancient tombs in Egypt, dating from 1500 BC. It was known to and used by Egyptian physicians, being mentioned in medical texts as a remedy for a multitude of ailments (Booth M. 1996). The Greeks were also aware of opium and used it for medicinal purposes; the medical priests of Aesculapius gave opium to those seeking a cure from illness but also used it in a spiritual or occult capacity. Hippocrates wrote of the usefulness of opium in treating various ailments but was also aware of its harmful properties if used injudiciously and so he warns doctors in the Hippocratic Oath

“I will give no deadly medicine to anyone if asked nor suggest any counsel” (Hippocrates).

With the decline of the Greek influence and the rise of the Roman Empire the knowledge of opium spread to Rome. Somnus, the god of sleep, is frequently portrayed as a small boy carrying a bunch of poppies and an opium horn and Ceres, the goddess of fertility used opium to relieve pain and studies of her show her holding a bunch of poppy pods. Such was the importance of opium that the poppy appeared on the face of some Roman coins (Booth M. 1996).

Opium was also well known to Arab traders and doctors who spread the knowledge of its use around the Middle East, North Africa and Spain. The Arabs established a trade in opium in this area, with their doctors mostly using it as a medicine. Its use declined in Europe through the Dark Ages but was rediscovered by Christian Knights, when fighting on the Crusades, who learned of its properties from the Moors.

As Arab influence in trade declined and Venice became the centre of European commerce opium was once again imported from the Middle East. Its use was mostly medicinal and was promoted by certain well-known doctors such as Paracelsus, whose reputation was enhanced by his use of the drug (Paracelsus). The name “laudanum” from the Latin verb lauder “to press” was first coined by Paracelsus when referring to his opium pills, but it was Thomas Sydenham who made the name better known for his mixture of opium dissolved in alcohol, that is red wine mixed with herbs (Booth M.).

Laudanum was the main form in which opium was taken in Europe until well into the 19th century. This was the mixture used by Thomas de Quincey whose famous work “The Confessions of an English Opium Eater” first alerted the public to both the pleasurable effects of opium use and the less attractive ones of withdrawal symptoms and addiction (DeQuincey T. 1821).

Thomas Dover was the inventor of another opium product, Dover powder, which first appeared in the London Pharmacopoeia of 1788 and was still in use as a teething powder up until the 1930's. Dover had studied under Sydenham but left medicine to become a privateer and was responsible for the rescue of Alexander Selkirk (on whom Defoe based his fictional character Robinson Crusoe). Dover later returned to England re-established his medical practice and promoted his powder, with much success (Booth M. 3996).

19th and early 20th century.

During the 19th century European powers continued to colonise the known world and set up fleets of trading ships. Some of this trade involved shipping large quantities of opium from India to China in exchange for other high quality goods, the opium from India being more plentiful and of a superior quality to that found in China. There was a ready and increasing market for opium in China so much so that increasing numbers of the population became addicted much to the alarm of the Chinese Emperor, Tao Hang, who in 1840 imposed restrictions on opium shipping and importation. This was resisted by the British merchants, who sought the help of their government, which led to the so-called Opium Wars between Britain and China (1839 to 1847 and again in 1856). The British were militarily successful, took possession of Hong Kong and greatly increased the trade of opium from India causing more problems for the Chinese. Trade in opium was very lucrative for the merchants involved and profitable to the British exchequer; which was why such trade continued well into the 20th century. Little of this opium found its way to Europe or to America and therefore didn't give rise to the problems with addiction in these countries as it did in China. However Christian missionaries and societies for social reform working in China recognised the problems caused by unrestricted opium trade and started to agitate for some controls. It was many years, into the beginning of the 20th century, before they made an impact and only then when trade was already shifting from opium to other products (Booth M. 1996).

Physicians in the 19th century prescribed opium for a variety of maladies, as well as for pain, as it was the only powerful treatment they had to hand and it was therefore used widely. Opiates were also to be found in a wide range of patent medicines, which could be bought in a variety of sites, that is through pharmacies or drug stores, general stores or by mail order. These patent medicines could easily be bought over the counter and did not require the sanction or approval of a physician or pharmacist (Bretcher E.). The rapid population increase and migration into and across America in the late 19th and early 20th century meant that medical services in large areas of this country were sparse and poorly developed and therefore people had to rely on patent medicines for relief of symptoms. Most of the opium consumed in America at this time was legally imported and some was legally grown, in fact Congress did not ban the cultivation of opium poppies until 1942 (Ibid). Opium was also grown in Britain during the 19th century, especially in East Anglia (Berridge V.).

Morphine, the most pharmacologically active alkaloid, was first isolated from opium in 1803 by a German pharmacist, Serturmer. He called it morphine after Morpheus, the Greek God of dreams (Robertson R. 1987). In the 1840's the hypodermic syringe was developed and was used by army medics to deliver morphine to injured soldiers during the American civil war. This led to the capability of delivering a purer and stronger analgesic, with a faster action than heretofore, which in turn led to much morphine dependence amongst the surviving combatants, the condition becoming known as the 'soldier's disease' or morphinism (Berridge V.).

It was not until 1893 that heroin was first synthesised in St Mary's Hospital, Paddington, London, by the acetylation of morphine. However it was first produced on any large scale, that is manufactured, by the German pharmaceutical company Bayer. Heroin is thought to be a more powerful euphoriant than morphine as it crosses the blood-brain barrier faster than morphine alone and therefore its action is more immediate, it is re-converted into morphine within the body. The word heroin is from the German word heroisch meaning "mighty-one, hero¹ and was first marketed as a cure for the problems of morphinism, as more people were becoming aware of the problems of unrestricted use of morphine (Robertson R. 1987).

Throughout the late 19th century a number of factors were coming together which led the leading world's governments to act in concert to 'control' the use of opiates.

These factors were firstly a growing professionalism amongst the emerging disciplines of pharmacy and medicine. Those two emerging disciplines felt a need to have some control over the use of opiates, the most powerful of medical agents, and of course this control would also confer some advantage to them over rival disciplines. Secondly there was a growing awareness of the problem with addiction to morphine, morphinism, which incidentally was mainly iatrogenic in origin. The problem of morphinism should however be seen in context, that is, it was a minor problem compared with that caused by alcoholism. Indeed some doctors, at this time treated alcoholics with morphine preferring their patients to be addicted to morphine than alcohol, as it was seen to be less detrimental to general health (Brecher E. 1972). Thirdly there was an increasing and developing social awareness amongst politicians, stimulated by missionary groups and other socially concerned groups, as to the evident problems of poisonings, suicides and accidental deaths, especially those of children, from the easily available and indiscriminate use of opiate preparations (Berridge V. 1984 & 1996). Fourthly there was a growing racism apparent in England and America directed at the large number of immigrants, economic migrants, coming to these wealthier countries to work in building the infrastructure of these growing economies. The increasing awareness of the use of opium, in opium dens; especially amongst Chinese immigrant workers in London and America alarmed politicians and Church leaders on both sides of the Atlantic and led to the banning of opium used for smoking. These Chinese workers were disliked and feared by large sections of the population and were often blamed for society's problems. It was felt that the more vulnerable members of society would be attracted to such 'dens' with resultant damage to themselves and their families. The opium used for smoking was in fact quite weak and when its use was banned it forced those with an addiction to use stronger but still legal preparations (Stimson G, Oppenheimer E 1982).

The first legislation in Britain that attempted to control public access to opiates was The Pharmacy Act of 1860. This Act restricted the sale of opium to pharmacies, that is through licensed pharmacists. However this only restricted the sale and distribution of opiates but not the possession, or use of opiates by any individual. There were a number of international meetings convened by leading governments to discuss the problems presented by the then large world wide opium trade. These meetings were mainly American driven and were at first resisted by Britain and other European powers, who had the larger share of this lucrative trade. However, in 1912, "The

Hague Convention” was finally agreed, the main proposal being to limit the use of morphine, cocaine and opium to “legitimate medical purposes only”. In America this led to the passing of the Harrison Act (1914) which when interpreted by the courts made it illegal for a physician to prescribe opiates to their addicted patients for maintenance purposes, as the treatment of opiate dependence was not considered a legitimate medical practice. As a result of the Harrison Act many physicians were prosecuted for prescribing for their addicted patients, and for the first time made opiate use a secretive, even criminal behaviour. Best estimates of the number of drug addicts in the USA prior to 1914 are about 250,000 persons (Bretcher E. 1972), The Harrison Act did nothing to halt or slow the growing number of addicts; it just pushed the problem underground and in effect made it a criminal act to use opiates for other than strictly medical needs.

In Britain the Dangerous Drugs Act of 1920 imposed control over importation and placed restrictions on the use of opium. Then in 1926 the Rolleston Committee considered the medical use of opiates and recommended the medicalisation of dependence and opposed the criminalisation of opiate use as in the U.S. Much has been made of these different systems adopted by these two major powers, however it should be stated that these were related to different problems. The American response to the problems presented by opiate addiction is seen as a judicial, punitive one and the so-called ‘British System’ as a more humane medical model. However the problem in Britain was confined to only a few hundred addicts rather than the 250,000 and more addicts in the United States. There was a different response to what was a different problem. This situation persisted up until the 1960’s. (Berridge V. 1984, 1996 and Booth M. 1996).

Opium use in Ireland

On reviewing the literature there is little to persuade one that the experience of opiate use in Ireland was much different to that in other parts of Europe except that being on the western seaboard of the continent opiates took a lot longer to arrive into Ireland. Alcohol was the first and the chief psychoactive agent used widely by people in Ireland, much as it is today.

Prior to the 18th century the medical fraternity in Ireland was organised, as in other parts of Europe into three distinct groups. The Physicians were the elite, the most

important healers; they were scholars with a University education well versed in the classical theories of medicine and were often trained in theology as well as physic. Wealthy families retained them to attend to the medical needs of their family and immediate retinue. Others involved in healing were the surgeons, barber surgeons and apothecaries. There was rivalry between these groups the Physicians seeing themselves as the only properly qualified practitioners. Dermot O'Meara, physician to the Butler family of Kilkenny and a medical graduate of Oxford University, wrote on his return to Dublin in 1619 that very few Dublin practitioners had any qualifications. He described the situation as follows:

“Here not only cursed Mountebanks, ignorant barbers and shameless quack compounders but also persons of every craft whatsoever loose women and those dregs of humanity who are either tired of their own proper art and craft or inflamed with an unbridled passion for making money, all have free leave to profane the holy temple of Asculapius.” (Fleetwood J.).

The Edinburgh pharmacopoeia was first published in 1727 and would have been a standard reference work for physicians in Dublin at that time, it has a brief reference to opium praeparatum. In 1730 it is known that a preparation of Diacodium was used as a sedative to quieten orphaned children resident in the Foundling Hospital, now the site of the St James's University Teaching Hospital. In 1791 the Apothecaries Act set out to control the sale of arsenic, because of its dangerous properties but there is no reference to narcotics. Fleetwood in his history of Irish medicine refers to medical students on grave robbing expeditions disarming mourners guarding the grave of a loved one with a mixture of potteen and narcotics, this mixture was known as a 'Mickey Finn' (Fleetwood J. 1983).

In 1844 Dr Francis Rynd, physician to the Meath Hospital, first described a method of instilling:

“a solution of fifteen grains of acetate of morphine by using an instrument made for the purpose” into a lady suffering from intractable neuralgia. The instrument used did not have a plunger and the liquid was infiltrated by gravity only (Berridge V.,1987 Coakley D.1994, Rynd F. 1845). This was the precursor to the hypodermic that was developed soon afterwards in Edinburgh and in America (Coakley D.1994). In 1850 the Dublin Pharmacopoeia was first published and it details the preparation of morphia from Turkish opium (Fleetwood J. 1997).

Opium was cultivated in Britain between 1790 and 1820, mainly in East Anglia, and Irish labour, which was cheap and plentiful, was sought to harvest the opium. One commentator at the time suggested that cultivation of opium in Ireland might be the means of “*rejuvenating Irish economic life*”, that is opium cultivation could be the solution to the Irish problem! (London Medical Repository). By 1899 the growing problem of morphinism was exercising the minds of the Dublin medical fraternity and Dr H C Drury addressed the Royal Academy of Medicine on the subject of “Morphinomania” in that year. In his paper he described the problems associated with the liberal use of morphine and said that these problems were particularly prevalent amongst the medical profession. (Drury HC. 1899) However in 1924 Boxwell, Professor of Pathology and Purser, Professor of medicine, at the Royal College of Surgeons in Ireland, in their textbook, “An Introduction to the Practice of Medicine”, in a section headed “Drug Habits - Morphine and Cocaine” state:

“If the lurid accounts which one reads in the papers of what is happening elsewhere may be believed, the drug habit is comparatively rare in this country” (Boxwell and Purser 1924).

This appears to have been the prevailing situation in Ireland through the early and middle parts of the twentieth century until the relatively recent emergence of a serious problem with opiate use in the 1970’s.

By the early part of this century we see governments exercising control, through legislation and the medical profession through changes in practice, of what was seen by the public to be a growing problem with easy access to, and abuse of opiate preparations. Strict enforcement of the Harrison Act by the Treasury Department had largely eliminated legitimate sources of opiates in America, by 1919. People with addiction problems had only two options, to go into a government sponsored treatment centre for a withdrawal programme or continue getting supplies illegally through criminal elements willing to supply their needs, at a price. Many who went through the withdrawal programme did not complete the programme or relapsed soon afterwards. (Macken U. 1975) Morphine addicts of the pre Harrison Act era were mainly female and had developed a dependence to opiates whilst under medical care, whilst those who became addicted to opiates after this time were mostly male, largely urban dwellers and drawn disproportionately from minority ethnic groups. It was not until 1935 that the American Government instituted a limited rehabilitation

programme, which was directed at federal prisoners who were drug dependent. Two facilities were opened to provide this service for prisoners and other voluntary patients, one in Kentucky in 1935 and a further one in Texas in 1938. These programmes met with little success. (Ibid)

Methadone was the first synthetic opiate to be produced; it was manufactured in Germany during the 2nd World War, as the German authorities were unable to obtain adequate supplies of opium to manufacture heroin. It was first named Aldolphine, after Adolph Hitler. However it wasn't until 1964 that two New York doctors, Vincent Dole and Marie Nyswynder of Rockfellar University began to study the use of methadone as an opiate substitute in the treatment of opiate addicted patients (Bretcher E.1972). Methadone has similar properties to heroin in terms of its analgesic effects but does not have the same euphoric effects; it has a longer half-life of between 8-12 hours and is usually taken orally. Thus it can be used as a once daily dose to substitute for more frequent heroin or other opiate use and allow an addicted individual to stabilise his or her lifestyle. After a successful trial Dole and Nyswinder extended treatment facilities to 4,000 affected individuals and soon methadone maintenance became an important part of the treatment for drug use problems in America and then later in Europe (Dole V.P and Nyswinder E. 1976). However substitution of heroin with methadone only changes one addiction for another. In Britain there was little to worry the authorities about the numbers of opiate users in the early part of the century. In 1935 there were 566 illicit drug users notified to the Home Office, by 1939 this had fallen to 500 and in 1945 was 191 persons. This figure rose to 217 by 1950 and to 322 by 1958. The Government set up the Brain Committee to investigate this small but growing number of drug users and it's first report assured the Government that there was little to worry about (Berridge V. 1987). Heroin users at this time were under the care of a small number of general practitioners based in London who prescribed for them. One of the more famous general practitioners of this time was one Lady Frankau who had very liberal views on the prescribing of opiates and who in one year was responsible for one sixth of all prescribed heroin in Britain. (Macken U., Booth M.) The number of drug users increased dramatically at this time and attracted and exercised much media attention and this led the Government to re-establish the Brain Committee, which reported in 1965. (Stimson G., Oppenheimer E.) This report was quite different in tone and in its recommendations to its early report. This report recommended the tightening of controls on doctors and limiting

their right to prescribe opiates. It recommended the establishment of drug treatment units and increased policing of the problem; prescribing for addiction problems was to be limited to these units and the names of dependent individuals were to be 'noted' on a central register at the Home Office. The changing nature of the visible drug use problem and the sudden rise in the numbers of drug users prompted a major change in Government policy from one of laissez-faire to one of more rigorous control, however the policy that addiction was a medical problem persisted. Despite the establishment of these drug clinics in the major towns and cities throughout Britain the number of addicts registered continued to grow and was about 3,000 by 1971. This was thought to be due to younger people who being better paid than previously were socially mobile and had easier access to heroin and other drugs. This remained the picture until the 1980's when drug use became more widespread with the sudden availability of good quality cheap heroin brought into the country by organised criminal gangs. This increased availability and use of heroin was to be found concentrated amongst the vulnerable youth in deprived inner city communities (McGregor S. 1989).

In contrast to Britain there was no obvious drug culture in Ireland in the early 1960's. However Irish society and the economy, under the leadership of the Lemass government began to open up and this led to a short-lived era of relative prosperity. This new prosperity, a young population with access to outside cultural influences, through travel, the new television service and other media, meant that Ireland would have increasing difficulty in avoiding those behaviours manifest in other societies. The drug culture prevalent in other societies would find it's way into Irish life. By 1967 it was apparent, from pharmacy break-ins, that there was a market for amphetamines and barbiturates amongst other drugs. Some of the earliest opiates to find their way onto the streets were Diconal and Palfium (Carney PA. 1972). In response the Government, on advice, set up a special Garda Drug Squad in 1968 which comprised four officers under the leadership of Sergeant Denis Mullins. Later that year they also set up a working party, under the chairmanship of Dr Karl Mullen to look into the problem of drug abuse and to advise the government on appropriate action. During the first six months of 1969 there were 40 break-ins at Dublin pharmacies, which resulted in the Dublin Health Authority withdrawing all addictive drugs from its outlying dispensaries (Macken U. 1975). In the same year the government gave funding to establish a drug treatment centre at Jervis Street Hospital,

which for the first three years was run by social workers until a medical director was appointed in 1971. In the early years of operation the drug clinic saw patients who had a variety of drug related problems such as barbiturate dependence, adverse reactions to hallucinogens such as Lysergic acid diethylamide (LSD), opiate and benzodiazepine dependence (Butler S. 1991). This situation prevailed up until 1978 when it was apparent that there was suddenly available a large quantity of good quality heroin onto the Dublin streets. This availability is thought to be due to Iranians fleeing the revolution and bringing heroin as an easy to transport cash crop. Street heroin became available in all the major cities across Europe over the next two years (Dean G (ii) 1985). This sudden increase in heroin usage in a growing proportion of the European youth led to swamping of the dedicated medical and drug services. The Governments largely reacted in a punitive way introducing tougher penalties on drug pushing and possession of large quantities of any illegal drugs (Butler S. 1991).

When, in 1985, testing facilities for HIV antibodies became widely available it was quickly apparent to the Health authorities across Europe and America that many drug users were HIV positive and likely to develop AIDS. This was especially so in those countries and cities where there was a history of drug use by injection. Injecting drug users were quickly identified as one of the main vectors of the AIDS epidemic. The advent of HIV in a large percentage of drug users changed how the Health authorities and Governments were to address the problems posed by drug users.

Summary

Opium has been used since the earliest times to bring relief of pain in all type of ailments. It was also used to bring a feeling of wellbeing and even a sense of euphoria to lots of people who used it in a variety of different ways. The growing professionalism of the medical and the pharmaceutical fraternity made opium a target for these professions to control the use and distribution of the then only powerful therapeutic agent. Governments became worried about poisoning secondary to opiate use and then the addiction to opiates, when it became apparent that there were increasing numbers of addicts in both Europe and America. These governments set about trying to control the supply and access to opiates which resulted in criminalising some and medicalising other drug use behaviour, whilst not diminishing the scale of the problem. The problems, both criminal and medical, associated with drug use are now greater than at any time in history.

Chapters 3

HIV INFECTION

“The epidemic form of AIDS is a recent disease, whose natural history is unfolding before our eyes. We lack sufficient follow-up, at this time, to predict the outcome of the disease beyond ten years”. (Professor Luc Montagnier-1996)

It is now accepted by the medical and scientific community that infection by Human Immunodeficiency Viruses (HIV) lead to the clinical conditions known as Acquired Immune Deficiency Syndrome or AIDS. It is thought that there may be co-factors such as co-existing infection, which speed up the progress from initial infection to severe depression of the immune system with its consequent clinical presentation.

HIV exists in two main forms, HIV1 and HIV2. These two viruses appear to have moved over from other primates to humans, HIV1 from chimpanzees and HIV2 from the Mackay monkeys. HIV1 causes most HIV disease worldwide, HIV2 appears to be confined mainly to West Africa but cases have been reported from East Africa, Europe, Asia and Latin America. Ten different genetic sub types of HIV-1 have been found but their biological and epidemic logical significance is as yet unclear. These two viruses appear to have moved over from other primate hosts to human hosts: -HIV1 from chimpanzees and HIV2 from Madburg/Mackay monkeys (Montagnier L).

Both HIV 1 and HIV 2 are transmitted in the same way, that is the virus enter the body through three main routes. Sexual spread, which is through unprotected sexual intercourse between man and woman (heterosexual) or between men (homosexual), is the main route worldwide. Incidentally there are to date no documented cases of sexual spread between women. The second route is blood borne, that is through transfusion of whole blood or other blood products, or contamination of shared injection equipment. The third route is materno-foetal that is from infected mother to her foetus or infant during pregnancy, delivery or when breast-feeding (ibid). HIV-2 appears to be less easily transmitted than HIV-1 and progression from HIV-2 infection to AIDS is slower. However clinical AIDS appears to be identical whether from HIV-1 or HIV-2 infection (Wright E 1996). After entering the body the virus appears to have an affinity for and infects the CD4 positive T-lymphocytes, impairs

the cells, invades, multiplies and then destroys the cells with resultant immunodeficiencies. This renders the infected person open to opportunistic infection and malignancies, which characterise the acquired immunodeficiency syndrome. The average time between infection and death from AIDS, if untreated, is about 10 to 12 years. It would seem that there is no difference in the incubation period despite the source of infection, socio economic indicators and gender but that mortality within the injecting drug use group from causes other than HIV infection is much higher (Selwyn P 1992, Prins M 1997).

Epidemiology of HIV/AIDS in Ireland.

The earliest known cases of AIDS in Ireland were reported in 1983, they were two males, one homosexual and one bi-sexual both of whom developed AIDS with Kaposi sarcoma (O'Keefe F. et al 1983). Most of the earliest AIDS cases were in homosexual men

“many of whom had, from the late 1970's, travelled in Europe and Africa but especially to the seaboard cities of the United States where AIDS first became apparent.” (O'Keefe F. 1983, O'Briain S. 1988).

However when testing for HIV antibodies became widely available in 1985 it quickly became apparent that a large percentage of drug users were infected with the virus. Some of the earliest cases of AIDS were in men who were both homosexual and injection drug users. Table 3.1 sets out the numbers of cases of AIDS in Ireland by year and risk category from 1982 to 1997.

By 1997 41.87% of ever AIDS cases (n=255) are to be found from the IV drug users group, 36.65% (n=211) in the Homo/bisexual group, 12.5% (n=76) in the heterosexual group and 5.1% (n=31) in the haemophiliac group. Table 3.2 shows the level of HIV infection in the various at-risk groups. (See table 3.1 and 3.2 below)

Table 3.1 – Cases of AIDS to 31st December 1997

Category	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	Total
Homo/Bisexual	2	0	1	1	1	6	21	17	22	23	15	13	27	16	34	12	211
IV Drug Users	0	0	0	1	1	9	10	21	27	31	27	42	21	23	33	9	255
Homo-Bisexual/ IV Drug Users	0	1	1	1	0	1	1	2	0	0	0	1	0	0	1	0	9
Haemophiliacs	0	0	1	0	3	3	3	6	1	3	1	1	6	3	0	0	31
Heterosexuals	0	0	0	0	0	1	1	2	8	11	7	11	7	10	11	7	76
Babies born to IV drug users	0	0	0	1	1	0	2	1	2	1	0	0	1	2	0	1	12
Other Children	0	0	0	0	0	0	0	0	0	1	0	0	5	0	0	0	6
Undetermined	0	0	0	1	0	0	0	2	1	1	0	0	0	1	0	2	8
Transfusion Recipient	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	2	1	3	5	6	20	38	51	61	71	50	68	67	55	79	32	609

Source for tables 3.1 and 3.2: Department of Health (Dublin) 1998.

Table 3.2 - Yearly HIV Positive Antibody Results from the Virus Reference Laboratory

Category	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	Total	%of Total
Intravenous Drug Abusers	221	112	72	58	57	50	34	82	52	20	19	20	21	818	44.22
Children at Risk	8	11	16	18	10	11	4	7	12	10	4	8	10	129	6.97
Homosexuals	39	11	21	17	33	25	27	58	48	31	33	41	37	421	22.76
Haemophiliacs	92	13	7	0	0	0	0	1	1	0	0	0	0	114	6.16
Haemophiliac Contacts	0	0	0	0	0	0	0	0	0	0	1	1	1	3	0.16
Hospital Staff (Occupational hazard /.Needlestick)	0	0	0	0	0	0	0	0	0	0	1	0	3	4	0.22
Transfusion	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0.16
Blood Donors (specimens Referred by BTSB)	3	1	3	2	4	1	1	2	1	2	0	5	1	26	1.41
Organ Donors	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Visa Requests	0	0	0	0	0	0	0	1	0	0	1	0	0	2	0.11
Insurance	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.05
Prisoners	0	0	0	0	12	0	1	0	1	0	2	2	5	23	1.24
Hetero/Risk unspecified	0	21	26	20	0	24	25	50	21	22	30	27	40	306	16.54
Total	363	169	145	115	116	111	92	201	137	85	91	106	119	1850	

Again the IV drug users group is the largest single group accounting for 44.22% (n=818) of all people with HIV infection. Those children who are HIV positive are 6.9% (n=129) of the total and make up the 'children at risk group', they are mainly children born to mothers who are HIV positive through injection drug use or were infected by their partners who are positive through injecting drug use. If these two figures are added together, that is 44.22% and 6.97% then just over 50% of all HIV infection have been acquired through injecting drug users. The main drug used being one of the opiates, mainly heroin.

However these figures disguise the changing epidemiology of this infection. The number of heterosexually acquired infections is slowly climbing and the numbers in the other risk groups are falling so that, in 1997, 33.6% (n=40) of new cases were identified in the heterosexual risk category, 31.1% (n=37) homosexual and 17.64% (n=21) of injection drug users. The infection is no longer restricted to men who have sex with men and injecting drug users but is to be increasingly found in the wider community whose main risk behaviour is heterosexual intercourse.

Clinical Presentation of HIV Disease

There are no signs or symptoms which are unique to HIV/AIDS as it is a multi-system disorder with a variety of manifestations. Therefore HIV disease is now part of a differential diagnosis in any unexplained clinical presentation. It has been likened to Tuberculosis in its protean manifestations and physicians hold that to know and understand HIV diseases is to "know" medicine. Further tuberculosis is one of the major opportunistic infections in clinical AIDS.

The **natural history** of a person infected with the HIV virus is that they will progress more or less step wise through a series of characteristic clinical stages in line with progressive depletion of CD4 lymphocyte levels. This clinical picture can be radically altered with the new anti-viral triple therapies outlined at the Vancouver AIDS Conference 1996 (Vancouver 1996). However it is important to remember that up to 90% of people with HIV disease do not have access to these newer therapies and in many areas, especially Sub Saharan Africa they do not have access to basic medications for palliative care such as appropriate analgesics, antifungals and antibiotics (Odomgo-Agimya D. 1997).

HIV spread began to be visible in the late 1970s and early 1980s among men and women with multiple sexual partners, in East and Central Africa, and among homosexual and bisexual men in some urban areas of the Americas, Western Europe, Australia and New Zealand. Today the virus is being transmitted in all countries. It is estimated that 22.6 million people world-wide are living with HIV infection or AIDS. Of these 830,000 are children and about 42% of the adults are women. This proportion is growing. The majority of newly infected adults are under 25 years old. Five to 10% of all adult infection results from sharing HIV infected injection equipment by drug users. This proportion is also growing, and in many areas of the world drug use by injection is the dominant mode of transmission of HIV (United Nations 1996).

Table 3.3 shows the regional HIV and AIDS statistics in the various regions of the world, as of December 1996. (UN AIDS 1996)

Table 3.3 - Regional HIV/AIDS Statistics and Features, December 1997

Region	Epidemic started	Adults and children living with HIV/AIDS	Adult prevalence rate	Cumulative no of orphans	Percent women	Main mode of transmission for those living with HIV/AIDS
Sub-Saharan Africa	Late '70s - and early '80s	20.8 million	7.4%	7.8 million	50%	Hetero
North Africa, Middle East	Late '80s	210,000	0.13%	14,200	20%	IDU Hetero
South & South East Asia	Late '80s	6.0 million	0.6%	220,000	25%	Hetero
East Asia, Pacific	Late '80s	440,000	0.05%	1,900	11%	IDU, Hetero MSM
Latin America	Late '70s -early '80s	1.3 million	0.5%	91,000	19%	MSM, IDU, Hetero
Caribbean	Late '70s -early '80s	310,000	1.9%	48,000	33%	Hetero, MSM
Eastern Europe and Central Asia	Early '90s	150,000	0.07%	30	25%	IDU, MSM
Western Europe	Late '70s -early '80s	530,000	0.3%	8,700	20%	IDU, MSM
North America	Late '70s -early '80s	860,000	0.6%	70,000	20%	MSM, IDU, Hetero
Australia and New Zealand	Late '70s -early '80s	12,000	0.1%	300	5%	MSM, IDU
Total		30.6 million	1.0%	8.2 million	41%	

Hetero: heterosexual transmission; IDU: Injecting drug use; MSM: Men who have sex with men

Source: UN AIDS 1996

Within Europe, the pattern of spread of HIV/AIDS has changed with time. In the early 1980s the epidemic was characterised by male homosexual and bisexual cases forming the majority of those infected. Through the early 1990's this changed, as injecting drug users accounted for the highest proportion of newly diagnosed cases -that is 43% of adult/adolescent cases in 1996. At the end of the first quarter of 1997 the WHO (European Region) reported 191,682 AIDS cases of which 4% were paediatric cases that is under 13 years old (WHO 1997).

Recently the annual incidence of AIDS cases in Europe appears to have decreased. It reached a plateau in 1994-95 and decreased by 10% in 1996. The largest decrease is amongst homosexual men, down 20% with a decrease of 7% for injecting drug users and a decrease of 0.4% for heterosexually infected persons. Whilst this is welcome news only time will tell if it is to be sustained. It is noteworthy that the greatest fall in incidence is in homosexual men, who have been targeted for specific health promotion and education, and least in the heterosexual category that has only been exposed to general health promotion. As a group they have felt at less risk of HIV infection than the other identified 'at risk' groups.

There is a significant public health problem associated with HIV infection in the drug using population as there are approximately 68,000 AIDS cases in Europe whose principal mode of infection is injecting drug use.

The clinical presentation of HIV in drug users

There is little clinical difference in the presentation of HIV disease in drug users and others with HIV infection. There are however additional medical problems that are seen in injecting drug users such as abscesses, endocarditis, pneumonia and overdoses. Other problems would include concurrent infections such as hepatitis A, B, C, and D and sexually transmitted diseases. Many symptoms presented by drug users may mimic those commonly presenting in HIV diseases such as respiratory problems and gastro-intestinal problems, which are related to their drug use practices rather than HIV infection.

However clinical differences do occur, for instance Kaposi's sarcomas are more common among homosexual and bisexual men than amongst drug users. The incidence of TB and pneumonia's other than pneumocystis carinii pneumonia is higher amongst drug users, as is infective endocarditis. This is probably secondary

to repeated use of injecting equipment, poor personal care and social circumstances. Drug users, especially those who remain outside of treatment have a higher mortality than is found in their non-drug using peers. There is an excess mortality of about 15 times the expected rate (Carnwath 1997).

Special Issues for Women

“By the year 2000 women will comprise half of 30-40 million people infected with HIV and approximately one third of their children will also carry the virus. Women are biologically more vulnerable to HIV infection and their low social and economic status increases the risk of infection” (WHO ‘95).

Female drug users are at an increased risk of medical problem than their male counterparts. They are more likely to suffer from sexually transmitted disease, HIV, hepatitis and anaemia. In addition there are problems around pregnancy, contraception and gynaecology. They have higher stress levels and likely to suffer from anxiety and depression - much of this may derive from low esteem. Many have a background of abuse of all types in childhood that may predispose them to self-neglect and substance abuse including injecting drug use. These women as well as trying to care for themselves often have the added responsibility of children, a partner and keeping a home. All these factors make them more vulnerable and in need of appropriate supportive care. Some centres now recognise the particular problem of women drug users and have dedicated services for these women (Bourke 1997).

Drug Users in Prison

It is widely accepted, in many large urban centres, that there is a close relationship between heroin use and crime. Further that drug misuse in prisons is widespread (Task Force Report 1997). Recent studies on the British Prison System report on the previous underestimation and therefore underreporting on the extent of drug use and HIV infection in the prisons. One study showed that over half the male remand prisoners in one prison had a history of drug use prior to their detention and that this was under recognised on initial screening. Only 5% of those needing detoxification received such treatment (Mason et al 1997). A further study showed that 16 % of injecting drug users had shared needles in prison and some had started injecting in prison (Bellis 1997).

In Scotland Yirrel found using molecular linkage techniques on viral samples taken from HIV positive prisoners that 13 of 14 infected men had:

“viral sequences similar enough to indicate that one source of infection was common to all” (Yirrell 1997).

That is these prisoners were likely to have acquired HIV infection within the prison through the sharing of injection equipment. The author summed up their findings with the ominous statement

“Injecting drug use is a potentially explosive health care problem in prison” (ibid).

To address some of these problems the health services in some prison systems are now being shared between the criminal justice system and the health care system.

In the Irish prison system it is estimated that 70% of inmates in Mountjoy prison, the states largest prison in the state have a history of drug misuse. Prisoners appear to have a well-developed drug habit prior to detention and that approximately 50% of them have no desire to receive treatment for their addiction. Further there is evidence of extensive smuggling of drugs into the prison despite controls and screening. As in other countries the vast majority of prisoners who use drugs come from economically and socially deprived backgrounds (Task Force Report 1997).

The management of HIV/AIDS in drug users

Good management is based on optimal care for the individual to prevent or limit further progression of the disease, and to prevent further spread from the infected individual to others. That is, care for the individual, his/her family and for the wider public. Such care should involve a variety of treatment services both voluntary and statutory with psychosocial and educational supports. Many drug users and their families fail to access appropriate services for a variety of reasons; some of these would include indifference and hostility from sections or individuals working in the health care services.

Important advances in the clinical management of HIV are taking place at an increasingly fast pace, especially since the advent of the newer antiviral therapy first brought to public attention at the Vancouver AIDS conference in 1996 (Vancouver 1996). As yet there is no vaccine available to protect against HIV infection and so preventative strategies still rest with health education, that is imparting factual information that leads to behaviour modification. This education needs to be targeted

at the public in general and more especially at certain at risk sub-groups, such as gay/bisexual men and injecting drug users to get them to alter their sexual and drug using behaviour.

The management of HIV/AIDS amongst homosexual and bisexual men has been aided, and in fact driven, by well organised self-help groups who have insisted on being recognised as partners in care. By their actions they have challenged the paternalistic model of medical care and have been influential in changing this model of care to one of partnership between the clinician and the patient. This is beginning to have a beneficial effect on all aspects of clinical care (Pinching A 1989).

This has been achieved because the gay community have been organised, active, articulate and health conscious. The picture is very different to that in the drug-using group, whose activities in most countries are illegal. The illegal use of drugs and the expense of maintaining a habit mean that theft and/or prostitution are often used to finance a habit. This brings drug users constantly up against the criminal justice system and therefore as a group they have little trust in state agencies and services. However there is an exception to this in Amsterdam where drug users through their group Junky Union have engaged the city medical authority in dialogue and have been influential in fashioning Amsterdam's pragmatic drug policy (Bunning E. 1991).

Even when they use services the attendance of drug users tends to be poor especially if drug services and HIV services are separate. By its nature drug addiction tends to be a chronic relapsing condition. So the best care for drug users should involve treating their drug problem and HIV at the same time. Indeed, treating their drug problem is the key to engaging this group so that their HIV disease is properly managed, for their own sake and in doing so the potential for infecting a wider population is reduced.

The Role of General Practitioner

The care of drug users is best achieved by treating them as close to their community as possible, with secondary support from specialist drug treatment centres and HIV services. The general practitioner or family doctor is ideally placed in the community to be able to support such a strategy. He or she works in a defined small area, serving individual and family medical needs, with knowledge of local conditions and support networks. In reality however the role of the general practitioner in the care of injecting drug users has depended largely on the outlook and enthusiasm of the individual, that is care has been:

“reactive and pragmatic rather than planned and strategic” (Glanz A. 1994).

GPs have largely been reluctant to work with drug users, and patients with both drug problems and HIV disease as the drug use problem has been seen as the greatest deterrent for caring for these patients (Sibbald 1988). However many studies into GP’s attitudes were taken early into the epidemic and as time has gone on more and more GP’s having been prepared to take on drug users with or without HIV infection when properly supported and given resources (Bury J. 1997, Bradley F et al 1993, 1994). One of the doctors’ fears is that of personal safety and this can be largely overcome by GP’s treating individuals with the support of dedicated drug workers, working in close co-operation with the drug services and supported by appropriate specialist HIV services. The GP or family doctor should be well placed to provide continuing care to the individual but also and just as importantly to that individual’s family.

Harm Reduction

Up until the mid 1980’s drug treatment services around the world were mainly directed towards “curing” addiction, that is moving the drug user to a drug free state and supporting them in this abstinent state to engage in ‘normal’ social behaviour. Initial help was provided by medical drug treatment services supported by drug free ‘therapeutic’ communities such as Day Top in America, Phoenix House in Britain and Coolmine in Ireland. It quickly became apparent that there was a large reservoir of HIV infection amongst injecting drug users when HIV antibody testing became widely available in 1985. This posed a public health threat, not only within the drug using community but by sexual spread and vertical (materno-foetal) spread from drug users to a much wider community. This alarmed and prompted the drug services to review their approach. To varying degrees over the next decade drug services in most Western Countries adopted a more pragmatic approach and whilst many services retain the goal of abstinence from drugs for the individual they accept that many drug users especially opiate users cannot or will not stop using drugs. The reasons for not being able to stop include physical addiction and complex psychosocial problems. This pragmatic approach is one of harm reduction - that is to reduce the harm that drug users can do to themselves and to others by their continuing drug use and sexual activities.

In 1988 the Advisory Council, on The Misuse of Drugs (ACMD) stated:

“The spread of HIV is a greater danger to individual and public health than drug misuse. Accordingly, we believe that services which aim to minimum HIV risk behaviour by all available means should take precedence in development plans.”

The report goes on to say that:

“There needs to be changes in professional and public attitudes to drug misuse”.

Further that:

“we must be prepared to work with these who continue to misuse drugs” and

“not to do so would have a major effect on our ability to contain the spread of HIV”

(ACMD). This report has had a major effect on the drug services within Britain and beyond. Some of the services which aim to minimise HIV risk behaviour in injecting drug users are needle and syringe exchange, oral methadone substitution of opiates, provision of ‘safer’ sex education and easy access to condoms, at no financial cost to the individual. These services need to relate to the drug users, that is they need to be easily accessible and available, if they are to make any impact.

The experience in Amsterdam (Bunning 1991) and Glasgow (Bloor 1994) appears to show that harm minimisation/reduction programmes helps to keep the sero prevalence of HIV amongst drug users in these cities at a low level. Multi-centre studies in London (Stimson 1996) and Australia (Hurley 1997) show HIV incidence amongst injecting drug users can be reduced by harm minimisation programmes. However local communities and local businesses have often resisted the implementation of these services in affected communities. They fear that setting such services in their communities will have an adverse effect on their business and that such areas will be labelled as “drug areas” (Barry 1996). So whilst the health authorities and their drug services have tried to implement these harm reduction services with varying enthusiasm they have met strong sometimes unexpected resistance from communities. The lesson which has been learnt is that the drug -services need to enter into dialogue with affected communities in which they hope to introduce services, so as to listen to legitimate grievances and fears and introduce a service that all can support.

Not all services are as thorough, comprehensive and pragmatic as those are in Amsterdam (Bunning 1991). In that city they engage drug users in care by offering

“low threshold” and easy access services such as methadone substitution, through the methadone bus and by visiting police cells, hospitals accident departments and other places drug users may be found. They also offer needle and syringe exchange. Once engaged and using these services drug users are encouraged into one to one counselling around “safer’ sex and ‘safer’ drug use issues. This is supported through free condom distribution. The drug users are then encouraged to engage with the more formal medical drug services for methadone substitution and maintenance with full medical and social work support, hopefully leading to detoxification and a drug free life for those who wish to do so.

The Dublin Experience

Dublin’s experience with injecting drug users has been a relevantly recent one. There was little injecting opiate drug use in Dublin prior to the early 1980’s. At this time it became apparent that there was a growing problem with injecting opiate use in the more deprived, large public authority housing units around the city. HIV infection was probably introduced into this group in 1982 (Hillery I. 1990). Drug users form the largest group of HIV positive individual in Ireland accounting for over 40% of those who are HIV positive (Virus Alert 1997).

In the mid 1980’s there was only one drug treatment centre (Trinity Court) with ten inpatient beds for detoxification. This service struggled to cope with a large and growing problem through the 1980’s. Trinity Court at this time only offered drug detoxification and had a policy goal of trying to achieve abstinence in its patient group. It became evident that more comprehensive drug treatment services, locally based were needed and it is only since 1997 after an injection of £14 million that we are seeing such services emerge. In that interim period many bodies were engaged in dialogue, some of it ‘heated’ dialogue, to initiate appropriate services. This process has involved the Department of Health, The Eastern Health Board, Trinity Court, The Irish College of General Practitioners (ICGP), Pharmacists and voluntary drug organisations. The ICGP through its representatives were central to these discussions (ICGP Statement 1991). The new locally based services were set-up against a background of resistance by organised community groups. It is known anecdotally that criminal elements that were profiting from illicit drug supply were “supportive” of community resistance to locally placed drug services (Barry J. 1996).

During the interim period, that is through the mid 1980's up until 1996 many GP's became involved in treating drug users, some offering normal GP services, but no prescriptions for opiates, and others offering methadone maintenance. These services were difficult to regulate and were disapproved of by the institutional drug treatment services and the Garda (police). A few GP's who became reckless in their prescribing were reported to the Medical Council and some had their right to prescribe opiates restricted by the Council.

The drug treatment service in 1998 consists of six centres under the supervision of three psychiatrists who are specialists in addiction problems. Each of these six centres has responsibility for a number of satellite clinics, twelve in total. These satellite clinics are based in the heart of local communities and are run by local voluntary drug agencies, and are supported by local General Practitioners. The GP's work on a sessional basis in these clinics, they provide methadone maintenance and detoxification programmes, and whilst they provide limited medical support they encourage drug users to go to their own GP's for on-going medical care. When drug users are stabilised the intention is that their GP's would also take over care for their methadone maintenance along agreed lines, in line with an agreed national protocol.

There is now a centrally held treatment list of all drug users receiving methadone maintenance and an agreed protocol for implementation of this programme. The protocol was agreed between the Department of Health, the Irish College of General Practitioners and the Pharmacists bodies.

In addition to the services already mentioned there are now 34 in-patient beds for detoxification in three units. All the services are supported by community drug counsellors and education officers, and are under the direction of three area administrators, all reporting to one programme manager. In addition to the services listed there is a Gay Men's Health Project and Women's Health Project for Prostitutes.

Outside of these services there are a further 75 General Practitioners who treat and prescribe methadone substitution in their own practice. These doctors prescribe for 1,100 drug users whilst the services treat a further 1,400 people (Trinity Court 1997). These services are provided in conjunction with community pharmacists who dispense either daily or weekly to individuals. The total number of drug users was estimated to be 3,600 persons, and is made up of those persons known to be in

treatment (2,500) and those on the waiting list (1,100 persons) (Task Force Report 1996). This figure of 3,600 only refers to those people in contact with the service. Commiskey showed, by using capture recapture methods, that there were 13,460 drug users in Dublin by 1996; this is 21 per 1000 of the population. There is a considerable number of drug users not presently in touch with services. (Commiskey 1998).

The drug services are to expand further and the stated aim of the providers is to reduce the waiting lists to zero within the next few years, that is drug users would have easy and early access to full treatment services.

The community studies of drug use problems and HIV infection in drug users in Ireland all show that the vast majority of drug users are young and come from deprived urban communities (Dean et al 1992). It is therefore important to examine the history of one such community, the community from which the study group is drawn, and determine those characteristics that might influence a drug use culture.

Chapter 4

A HISTORY OF MERCHANTS QUAY WARD F

“Dubliners are wont to describe their City affectionately as ‘An Old Lady’. When visitors admire her outer garments- the broad streets, the 18th century houses, Fitzwilliam Square and St Stephens Green- they smile complacently and feel proud. Lift the hem of her outer garment, however, and you will find suppurating ulcers covered by stinking rags, for Dublin has the foulest slums of any town in Europe. Into these ‘quaint old eighteen century houses’ the people are herded and live in conditions of horror.” Dr Robert Collis 1936. (Collis R)

The study is geographically and demographically placed in one district electoral division of Dublin, that is the Merchants Quay F Ward. It is one of twenty distinct electoral divisions or Wards in the south inner city area of Dublin; the Ward being the smallest sub-division of the city for which there are census figures. The boundaries of the ward form a triangle with its base along the South Circular Road, from Dolphin’s Barn to the start of Donore Avenue. One side runs back from the start of Donore Avenue to its end, where it meets Cork Street, and the third side from this junction up to Dolphin’s Barn. The area is to the west of the main commercial and shopping district and close to the heart of the old city (See Maps 1, 2 & 3).

Merchants Quay F Ward is part of the *“ancient Liberty of Thomas Court and Donore”*. This was the first of Dublin’s Liberties granted by King Henry II, when he visited Dublin, in 1171.

“let an abbey be founded and dedicated to our holy martyr Thomas a Beckett”.

He gave the lease of lands in an area to the west of the then city boundary to the Victorine Canons to build this abbey. Laurence O’Toole, who became Arch-bishop of Dublin, laid the foundation stone in 1177 and the abbey soon spread to include the lands of Donore. Thomas Street is named after Thomas-a-Beckett, the murdered Lord Chancellor of England. The Liberty had the right to raise it’s own taxes, had a palace, a church, courts and a prison.

“It owed its allegiance to no one but God and the King”.

After the dissolution of the monasteries, during the reign of Henry VIII, the Abbey lands and property were ceded to William Brabazon who became Earl of Meath, and

thus the name of the liberty was changed to the Earl of Meath's Liberty (Johnson M. 1985, Gillespie E. 1973).

Merchant's Quay F Ward has strong links and associations with the Liberties, the oldest community in Dublin, where history and traditions can be traced to the Viking settlements. Over the centuries the Liberties have had a mixed history, with periods of economic prosperity interspersed with long periods of relative poverty.

The area has had an influx of immigrant labour over the years, bringing a variety of skills and trades to the area. Huguenots arrived in Dublin in the 17th Century, having been driven out of France because of religious intolerance; they introduced the weaving trade to the area. This trade flourished during the 18th Century but collapsed in the early 19th Century under colonial trade laws. Out of this depression the brewing and distilling industries began to expand. At one time (1804) there were thirty breweries in the liberties. The Guinness brewery was established in 1759 and is the last of the breweries in the area. The distilleries in the city have been "rationalised¹ and re-organised in the last thirty years and are now under one roof in the Smithfield area, just across the River Liffey, on the north side of the city.

The influence of the weaving trade can still be found in the area. On Donore Avenue there is an Old Weaver's Meeting Hall. The Tenters' is an area of housing, off Donore Avenue, which stands on what was an open field until early into this century. It gets its name from the bleaching green the 'tenters green', where linen cloth was stretched on "tenter hooks" to bleach in the sun. Thus, the expression "on tenter hooks" is used to describe someone under pressure or strain. The last weaving firm in the area was Elliotts, which closed in the 1970's; and was situated on South Brown Street which street joins Weavers Square to Donore Avenue (Gillespie E. 1973).

As a result of political and economic factors the fabric of Dublin City declined throughout the 19th century. From being a compact elegant city with fine wide Georgian streets and squares, in the early 1800's, to one pock-marked with tenement slums by the end of the century. These tenement slums were described as late as 1936 as being "*the worst slums in Europe*" in a series of articles, on the subject, published in The Irish Press newspaper:

“Thousands of children today face premature death through disease in overcrowded tenement houses. From the moment of their birth they have to face conditions which are fatal to healthy living” (Irish Press 1936).

Amongst the factors which led to this decline was “The Act of Union” in 1801 and the dissolution of the Irish Parliament. This Act resulted in a shift of political and economic activity away from Dublin to London and triggered the exodus of many wealthy and prominent citizens. This in turn led to a fall in property values and resulted in many fine Georgian houses falling into the hands of rack-rent landlords for very low prices. These properties were then packed with poor families, living one family to a room in totally inadequate and insanitary conditions (Kearns K. 1994). The famines in the 1840’s led to a mass exodus of peasants from the land, many of whom emigrated and others who flooded into the towns and cities looking for shelter and a chance to work. These people gravitated to the poorer areas of the city into already overcrowded sub-standard accommodation.

Some of the worst of these slums in the city of Dublin were in the Liberties area; in fact seven of the very worst were to be found in the Liberties in the 1870’s (ibid).

In 1900 there were 6,000 tenement houses in Dublin and one third of the population of the city lived in these “fine rookeries.” Sir Charles Cameron, Dublin City’s first Chief Medical officer, was appalled by the living conditions of the poor that he witnessed and in his memoirs in 1913 wrote:

“In the homes of the very poor the seeds of infective disease are nursed as it were a hot house” (Cameron C. 1920).

These homes were to be found in the overcrowded tenements in the heart of the city.

The situation had not improved by 1938 when there were 6,307 tenement buildings housing 112,000 people. However despite these appalling living conditions there seemed to be a great sense of neighbourliness in these areas, those having very little sharing all, and, as one eye witness would contend that:

“they were extraordinarily happy for people who were so savagely poor”

(Kearns K 1994).

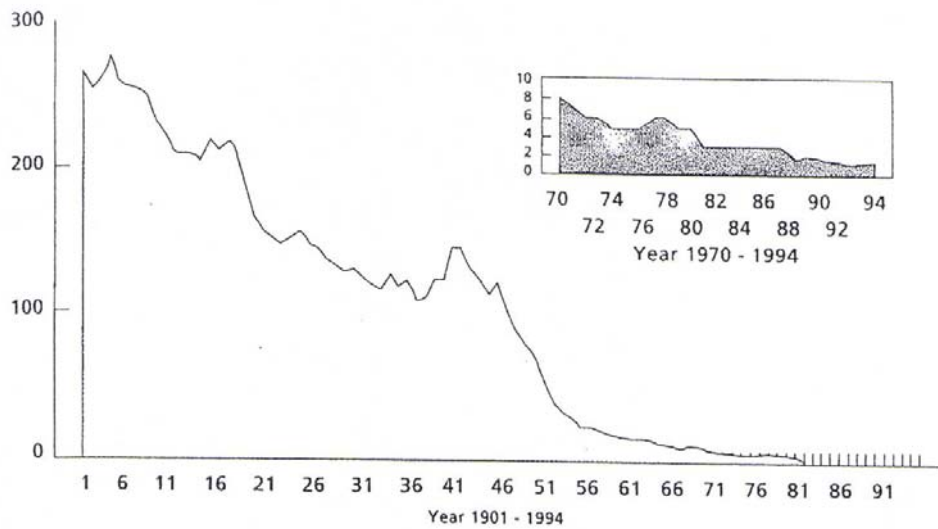
Under these adverse conditions the mortality rates were high, especially so for infant mortality, and concomitantly life expectancy was low. Pulmonary tuberculosis was rampant and brought devastation to many homes in the Liberties. The history of tuberculosis in Ireland shows that there was a nation-wide epidemic of the disease, which lasted over 100 years. Tuberculosis seems, from historical ‘Bills of Mortality’,

to have been a major cause of death from around the early 17th century and to have become endemic by the mid 19th century. This was probably in part due to the great increase in the population from 4 million persons in 1788 to 8 million persons in 1841 some 60 years later (Deeney J. 1954). This increase in population was mainly amongst the poorer tenant farmers or farm labourers, especially in the poorer districts of the South and West of the country. This led to continuous subdivisions of small farms that resulted in holdings, which were inadequate to sustain a family. Further the majority of the poorer people existed on a single staple food, the potato, and that this crop suffered successive blight with crop failure leading to the Great Famine of 1847. Thus the most favourable conditions for the spread of tuberculosis existed, that is, overcrowding with large families living in miserable conditions at or below starvation levels. Many of these people began to migrate to the large towns and cities, others leaving for Britain and North America. Other infectious diseases such as Cholera, Typhus, and Typhoid Fever had an enormous impact on the mortality of these reduced people and tend to disguise the effects of tuberculosis.

The tuberculosis epidemic increased in intensity during the second half of the 19th century and reached its peak at the beginning of the 20th century, thereafter declining to its present relatively low level. This decline has been more or less steady except for two periods, during the First and Second World Wars, when the conditions for the population became straitened with a resultant rise in the number of TB cases. (ibid)

Table 4.1 shows the fall in mortality from tuberculosis from 1900 up to 1994. The mortality rate for tuberculosis was 266 per 100,000 population in 1901 and had fallen to 1.4 per 100,000 by 1994.

Table 4.1 Mortality from Tuberculosis 1900 - 1994



Source: National Report on TB in Ireland 1993

Deeney in “Report of the National Tuberculosis Survey” 1950 - 1953 shows that the level of tuberculosis nationally was highest in Dublin and within Dublin in the most densely populated areas. The natural decline in the death rate from tuberculosis was slowed down by the increasing urbanisation of the population, that is, people migrating from country areas into Dublin and within Dublin to those already congested areas. The resultant overcrowded living conditions facilitated the spread of the disease (Deeney J.).

Lar Redmond in his book “Emerald Square” gives a graphical account of growing up in the Liberties area of Dublin in the 1920’s and 1930’s and of the devastation caused by tuberculosis (Redmond L.). Emerald Square consists of a small square of four roomed terraced houses situated just outside the Merchants Quay F Ward area, off to the other side of Cork Street.

Dr Robert Collis was one of the first physicians in Dublin to dedicate himself to paediatric care; he was also a playwright, biographer and social activist. He was one of the first doctors to enter Belsen Concentration Camp at the end of Second World War II and set up services there for displaced children. However during the 1930’s he was appalled by living conditions that he saw on domiciliary visits to the poor around the city. So much so that he wrote a play entitled “Marrowbone Lane” which depicts a family living in poverty and coping with the ravages of tuberculosis (Collis R.). The

play caused much controversy, which resulted in a public fund being established called the “Marrowbone Lane Trust”, which raised money to try and alleviate the poverty that Collis had witnessed. Marrowbone lane runs into Cork Street and is again close to the Merchant’s Quay Ward (See map 3).

In 1937 Dublin Corporation acquired the present site of St. Teresa’s Gardens under compulsory purchase order, from the Earl of Meath and the Religious Society of Friends. The site contained 64 small houses, which were occupied by tenants. This purchase was part of a slum clearance plan. It was proposed to demolish the existing dwellings and in their place to build 556 flats at a cost of” approximately five hundred thousand pounds. The Corporation intended to re-house inhabitants of some of the worst tenements in Watling Street, an area close to the river. However the outbreak of World War II or “the Emergency” put a stop to this building programme.

(Clarke M, Dublin City Archivist)

After further delays the flat complex was completed in 1951 with only 352 flats as some of the land designated for the complex had been sold in the interim, for the purpose of re-siting the local maternity unit, the Coombe Hospital. The complex was named Saint Teresa’s Gardens after the parish church of the same name. The complex consists of twelve blocks of flats three storeys high and two blocks of five terraced houses. There is one entrance into the complex, on Donore Avenue, with a central avenue, which ends at the rear wall of the ‘new’ Coombe hospital that was completed in 1967. At this wall is sited a large statue to St Teresa which was erected by the new tenants as a testament to their religious witness. (See Map 3)

Over the years a few of these flats have been converted for other uses, that is as small shops and a laundry, and so by 1979 there were 346 flats for tenants, that is 232 three-roomed flats and 114 four-roomed flats. Each flat consists of one living room with a small kitchen area, a small toilet cum bathroom and either two or three bedrooms. These compact flats were a marked improvement on the conditions the earliest tenants had endured in the tenements nearby.

The majority of the remaining houses in the Ward were built prior to 1919. They consist mainly of two storey houses on South Circular Road, many of which are owned by or let to private tenants, terraced houses on Donore Avenue, with smaller terraced houses and cottages behind Donore Avenue and again on Cork Street.

In the early years in St. Teresa's Gardens, there was a spirit of neighbourliness, friendship and co-operation. The community benefited from the prosperity of the sixties, and many of the men, who had earlier emigrated to England, returned home to take up new jobs in nearby industries. A tenant's association was organised to look after the interests of the people and it developed some local amenities such as community dances and clubs catering for all different groups. The sense of community that was established in those early years in St Teresa's Gardens is eloquently captured in a feature article "Taking Pride in the Gardens" (In Dublin Magazine 1983). The article gives an impression of a strong, stable and tightly knit working class community, which was well capable of coping with its problems and difficulties.

The seventies, however, brought planning decisions to relocate industry and develop housing estates in the suburbs, necessary decisions for an expanding city, but a fatal body blow to the inner city, and communities within it, like St. Teresa's Gardens. The cycle of expansion, development and contraction came full circle and the inner city was on the decline. In an attempt to bring together the published data on poverty in Ireland the report "Poverty and Social Policy" compiled for the Commission of the European Communities, had the following to say on the effect of urban change, growth and development on the inner city:

"With the escalating cost of land, transport and congestion problems, new industries tend to go to relatively distant suburban areas. The employment structure of the centre city becomes increasingly white collar and professional and unsuited to the skill profile of the traditional city labour force.

Population moves from the centre city areas to suburbs and the inner city's demographic and community structure declines. In turn, many of the services and facilities and buildings become redundant. Residual populations remain in the centre city, perhaps the aged who are unwilling or unable to afford to move, or the residents of the least desirable municipal apartment block on the lowest incomes with the high incidence of economic and social failure" (Joyce M., McCashin L. 1982)

In detailing these failures, the report continues

"In inner city areas the housing is older, smaller and in debilitated condition, most of the labour force is unskilled, the level of employment is considerably above the national average, and ownership of cars and telephones is extremely low."

Michael McGreil's study of "Educational Inequality in Dublin 1974", highlights educational deprivation in the inner city and showed that 73.6% of those living in the city centre areas had attended only national schools (McGreil M.1974).

The general pattern of inner city decline and decay has not spared Merchant's Quay F. A profile compiled by the Combat Poverty agency in the Liberties area of Dublin identified population decline, unemployment and early school drop-out as major problems in a number of south city electoral wards, including Merchant's Quay F (Combat Poverty 1977).

By 1979 this area of Dublin was at low ebb - there was continuing depopulation, unemployment levels were high and there was a growing youth population. Several older industries closed and others moved to 'green field' sites on the edge of the city. Many younger couples moved from this area to the newer housing estates closer to those industries. The features thus described were more marked in the local authority flat complexes. In 1983 the St Teresa's Gardens Development Committee, made up of local residents, published a report "Fighting Back" which included a census undertaken by this group (Fighting Back 1983).

The main findings of this census are reproduced in table 4.2, overleaf.

There was an 85% response rate by the tenants to this survey.

As the table shows there were high level of unemployment especially amongst a large youth population. There are poor levels of education attainment, as the report says:

"If is quite clear from these figures that the vast majority of young people leave school as soon as they legally can" - and so the chance of employment is further reduced. There was a high level of transience amongst tenants with a 50% turnover of tenancy in 5 years. The area had become an "open area" on Dublin Corporation's Housing list, this meant in effect that is a low priority housing area and families who had urgent social and accommodation needs were offered housing here. This had a destabilising effect on the community.

Table 4.2 - Summary of St Teresa's Gardens Development Census 1983

<p>(1) Youth</p> <ul style="list-style-type: none">• 57.7% of population in St Teresa's Gardens is under the age of 24 years.• The population distribution by age in St Teresa's Gardens shows the rate of young persons 0-24 years at 57.7% to be greater than the national rate (1979 census) by 9.8%.• Only 5% of the age group 15-24 participate in full-time education. In fact nobody from the age group 20-24 is in full-time education. . Nobody participates in third-level education.• Only 6 people in age group 15-24 are undergoing training with AnCO (<i>a government sponsored training organisation</i>). Two of these are on Community Workers Training Course. <p>(2) Unemployment</p> <ul style="list-style-type: none">• The overall unemployment rate in St Teresa's Gardens is 59.2%.• The unemployment rate for those in the age group 15-24 is 57.9%.• The unemployment rate amongst tenants who moved in, in the past two years is 67%. <p>(3) Transience</p> <ul style="list-style-type: none">• Almost 50% of existing tenants have been moved into the area in the past five years.• 55% of lettings in the past two years have been to families who did not indicate positive choice.• 65% of existing tenants wish to leave the area.• 44.5% of existing tenants are on Dublin Corporation's transfer list. <p>(4) Maintenance</p> <p>Over 50% of tenants are dissatisfied with maintenance service in the area.</p> <p>There is clear confusion amongst tenants of St Teresa's Gardens as to which Corporation working-sections are responsible to particular maintenance functions</p> <p>There is a corresponding confusion amongst Corporation personnel themselves.</p>

Source "Fighting Back," St Teresa's Gardens Development Committee 1983.

Ms Terry Kearney, a social worker whose allocated area of work was St. Teresa's Gardens, made the first official recognition that there was an emerging drug use problem in this area. She identified a group of young people using synthetic opiates, Diconal and Palfium; and attempted to set up some youth activities and services for the group. She reported her findings to the Health Board in 1980 but her findings were largely not believed (Kearney T. 1980, Cullen B 1992). She also wrote, as did the author, to the Health Education Bureau, one of whose briefs was to respond to the emerging drug problem, to ask them for some funding or other resources to help set up a youth service locally (See copy of author's letter Appendix 5). The Health Education Board refused to become involved arguing that the sponsoring of such a project was a matter for the Eastern Health Board and that it had not been approached by the health board for a response (Cullen B 1992).

At around the same time, this researcher, a general medical practitioner working in the area first started to hear of drug use problems in the surgery. The first clinical case was an urgent domiciliary visit to a young man who had collapsed following an intravenous injection of heroin. He was in distress with marked respiratory depression; he recovered in the casualty department following treatment with Naloxone, an opiate antagonist. Soon after this, the practice was confronted by a series of cases of jaundice, serum hepatitis, which proved to be hepatitis B infection secondary to parental drug use. These cases were reported to the Chief Medical Officer of the city An out-break of hepatitis B infection amongst drug users was reported at that time from the National Virus laboratory (Arthurs Y. 1981). The practice saw 16 cases in all, over an eight-month period in 1981. One particular case highlighted the worsening problem for the practice when a twelve-year-old boy presented deeply jaundice and suffering withdrawal symptoms. He gave a clear history of having used heroin for the previous two years, that is he first started to use heroin by injection at the age of ten years. This case was reported in a paper written by Ryan who was then working in the Jervis St. drug treatment centre (Ryan W. 1982).

The two practice partners became involved with other professionals, public health nurses, social workers, probation offices, local clergy and local residents in setting up a "community response" to this alarming and growing drug use problem.

In November of 1981 this community group submitted a report to the Eastern Health Board detailing numbers of persons known to them to be using drugs, mainly heroin which was being used intravenously. This report showed there were one or more drug users per family, in a minimum of 10% of the families, in St Teresa's Gardens. Many of these drug users were 16 years or younger (O'Kelly F. 1981, Appendix 4). The practice referred patients with drug use problems to the only drug treatment centre then situated in Jervis Street Hospital. The partners decided, after much deliberation, that the practice could not become involved in prescribing opiates to these drug users. It was felt that we could not be sure of our ability to control such prescribing and be assured that those attending were not "double scripting", that is accessing supplies of opiates from other sources. The policy then became one of "empathy, non prescription, referral for detoxification and continuing support" (O'Kelly F 1986). The practice continued to support and be involved in community efforts to address the problem caused by this drug use and to offer full general practitioner services to drug users and their families. By April 1985 the practice had records of 67 individuals who had attended with drug use problems and all had used heroin intravenously. The 67 individuals were drawn from the practice area and were mostly living in local authority flat complexes. Thirty-eight of the 67 came from St Teresa's Gardens (O'Kelly 1986). The Drugs Advisory and Treatment Centre (Trinity Court) also knew sixty-two of these 67 individuals (Trinity Court 1985).

In October 1982 the St Teresa's Gardens Development Committee hosted a seminar entitled "Local Community and Drugs" in a local school to which local people and professionals serving the community were invited. Matthew Bowden, secretary to this group, read a paper detailing his and other residents views of the drug problem locally. He started his paper by saying:

"Yes there is a serious drug problem in St Teresa's Gardens. Yes there is a serious drug problem in Dublin 8. Yes there is a serious drug problem in most of the flat complex's in the Inner City Area".

He went on to say:

"In vulnerable communities in Dublin, drug abuse is not to do with mere individuals getting kick; it is not because a few people cannot cope with the system and choose to drop out. Drug abuse is intimately linked with social, economic and even political

conditions surrounding the community. St Teresa's Gardens is one such community. It is vulnerable to drug abuse".

Further on in his paper he castigates the politicians who talked of the youth of Ireland as "*the hope of the future*" or "*the country's most valuable asset*" and says that the youth of Dublin's Inner City communities

"are offered no better alternative than a syringe in the darkness of a dimly lit balcony, a painless experience of euphoria, while they escape the lies, the contradictions, the hypocrisy of a state that once promised to ^cherish all the children equally' ... We live in an age of ignorant, arrogant and emotional approaches to the problem of drug abuse". (Bowden M. 1982)

In June 1982 the then Minister of Health, Barry Desmond, responding to reports of a great increase in heroin use in Dublin, commissioned the Medico-Social Research Board (MSRB) to investigate these reports. A quick and 'unscientific' report was prepared by Dr Bradshaw on the two areas of Dublin reported to have serious drug use problems, that is the North Inner City Community and the South Inner City, especially the Dublin 8 Area. His report was based on information from the local committees in each of these areas and cross referenced with figures of attendees at the National Drugs Advisory Centre based in Jervis Street Hospital. The report reveals that 91% of those aged 15-24 years were estimated to be using heroin in the North Central Dublin Area. Whilst estimates were not possible for Dublin 8 it was felt to be "as high if not higher" (Bradshaw J. 1983). The initial report was followed by a more detailed investigation of drug use in the North Central Area carried out by a local priest, Father Paul Lavelle, under the auspices of the Medico-Social Research Board. Dr Bradshaw had hoped to conduct a detailed study in the Dublin 8 area but met with local opposition from the local committee, the "Weavers Square Youth Development Project Management Committee". The author was a member of that committee and was keen for this research to be conducted, however local residents had little trust in the statutory authorities; they had co-operated in detailing local issues before on the promise of some ameliorating action which had not materialised. Dr Bradshaw and the Medico-Social Research Board had some insight into the problems of carrying out such a sensitive study in a vulnerable community but in other respects were wide of the mark. Dr Bradshaw suggested that:

“a young person might be acceptable to the community as a researcher, such as a medical student dressed in jeans, as he might blend in”. (Bradshaw J.1983)

A full study of the prevalence of heroin use in this community had to wait until May 1985. It had been hoped that Barry Cullen, a social worker who was then working in St Teresa’s Gardens would undertake this research, but he was refused any cooperation from the National Drugs Advisory and Treatment Centre by its Director, Dr Michael Kelly. This was thought to be due to the fact that Cullen had been publicly critical of the sluggish response of the Drug Treatment Centre to the growing problem. Dr Fergus O’Kelly, the author of this thesis, was commissioned by the M.S.R.B. to conduct the research. Access to information from the National Drugs Advisory Treatment Centre was mediated through Dr Dean, Director of the M.S.R.B. A review of the study aims and methodology is detailed at the end of this chapter (see page 51). This study, like the North Inner City Study, showed a high prevalence of heroin use by the younger members of this vulnerable community.

Soon after this study finished, HIV antibodies testing became available within Ireland. It was quickly apparent that one of the biggest ‘risk groups’ for HIV in Ireland were injecting drug users. The practice began to see patients who were HIV antibody positive and to offer general medical care in the absence of specialist care. A specialist, Dr Fiona Mulcahy, was appointed as Consultant Physician in Genitourinary Medicine with special reference to patients presenting with HIV infection, in January 1987.

Between October 1985 and May 1988 the researchers general practice saw 54 individuals with HIV disease. Forty-eight of these were injecting drug users, four were children of injecting drug users and two were other individuals who were infected through sexual contact, one male homosexual and one female a partner of an injecting drug user. The practice also had records of 137 injecting drug users who attended the practice in the decade 1978 - 1988. By 1988 three had died and 48 were HIV positive. This gives a sero-prevalence of HIV of 35% at this time (Bury G., O’Kelly F., 1989). In 1992 the author in conjunction with Dr Dean, by now Director Emeritus of the M.S.R.B., examined the known HIV sero-prevalence of three community cohorts of intravenous drug abuse identified between 1982 and 1985. One hundred and one (n=101) out of the total number of 203 persons, identified in these studies as injecting drug users, had been tested for HIV antibodies. Eighty-seven of

the 103 tested were HIV antibody positive, that is 43 of the total (n=203) of drug users from these distinct communities were HIV positive. By 1992 it is quite clear there was a substantial level of HIV infection amongst those drug users who had started injecting drug use before 1983, within Dublin (Dean et al 1992).

Summary

In 1991 the South Inner City Co-Operative Development Association (SICCDA) applied to the European Commission Programme “Quartiers en Crise” (Neighbourhoods in Crises) to partake in its programme. Michael Mernagh, a lecturer in sociology and member of SICCDA, was the chief author of a submission for funding under this scheme. In the submission to the EC programme the South Inner City area is described:

“the Liberties and Medieval City are at the heart of Dublin’s historical and cultural heritage”...

“There is still, despite the dramatic depopulation of these neighbourhoods, a strong sense of traditional community values and identity. These communities have been decimated in the past 20 years by accelerated urban decay, high unemployment, drug abuse, lack of social and recreational facilities, out-migration of young couples leading to population imbalance “ (Quartiers en Crises).

These few sentences sum up the recent social history of this area. It is not difficult to see why the vulnerable youth of this area embraced opiate use when heroin became freely available. Nor that a significant number of these drug users became infected with the HIV virus, when it was introduced unbeknown to them, into the drug using population around 1981 or 1982 (Hillery I. 1990).

This next section briefly reviews the original 1985 study into the prevalence of injecting heroin use in an area of Dublin’s south inner-city, the Merchant’s Quay Ward of the city. This study was commissioned by Dr Dean for the Medico-Social Research Board and commenced in June 1985.

The aims and methodology used are described below. The results of this study are the base line data for comparison with the second, follow up study (1995), and are reported in the “Results” section (P.71).

A Review of “Merchant’s Quay F. A study of the extent of heroin use in the Ward 1979-1985.”

The aim of the study was to determine the extent of heroin use in this district electoral Ward between 1979 and 1985 during which time it became apparent to local health care professionals that there was an emerging and serious problem with heroin use (Dean (i) G.1985,O’KellyF. 1986).

Objectives: The objectives of the study were:

- 1) *To determine the prevalence of heroin use* - that is to determine the extent of heroin use in Merchant’s Quay F ward for the period 1979-1985, and to determine separately the prevalence of heroin usage in the ward for the years 1979, 1981, 1983 and 1985.
- 2) *To determine a profile of those using heroin* - that is to obtain a profile of the heroin user, including information on family and social background, and further to compile information on the medical and drug history of the individual heroin user.

Target Area: Why Merchant’s Quay F?

The records from the Drugs Advisory and Treatment Centre at Trinity Court show that an area of Dublin comprising three adjacent electoral wards, including Merchant’s Quay F (MQF), had the highest number of people from any one area attending its service by 1985. The Drugs Advisory and Treatment Service was the only drug treatment facility in the country at that time (Trinity Court). Further a local youth development project had recorded a high level of heroin use in St. Teresa’s Gardens, the only public authority housing project in the MQF ward. Local people, with the support of professionals working in the area, had set up this “Youth Development Project” to respond to the growing problem of drug-abuse amongst the local youth. (Fighting Back 1983) The author of this study, Dr. Fergus O’Kelly, is a family doctor who has worked in the area since 1978 and is familiar with the area and it’s attendant problems. He completed a study on the profile of drug users within his the practice population, many of them whom were living in the MQF ward, in 1984 (O’Kelly F. et al 1986). The author was also a member of the management group of the Youth Development Project. Finally the study was confined to one electoral ward, as this is the smallest area for which detailed census figures on population and age structure are available (CSO 1981).

Subjects:

The target group was persons who had used heroin and who had a settled address in the Merchant's Quay F ward during the time period 1979-1985. 1979 was selected as the first year for the study as this was the first year that health and social care workers became aware of heroin use becoming a problem for the area. The method of study was similar to that used by Bradshaw in the studies conducted for the Medico-Social Research Board in North Central Dublin and Dun Laoghaire in 1983 and 1984

(Dean (ii) G., et al 1985). In Bradshaw's study a committee of persons with local knowledge of the heroin problem were brought together. They were asked to compile a list of suspected heroin users living in the target area. The researchers then validated the list, by approaching the individuals who agreed to be interviewed and admitted to heroin usage during that interview.

Bradshaw supports this methodology in his paper:

"It became clear that the members of the committee had a unique combination of qualities relevant to the investigation proposed: first, detailed local knowledge of the people and the goings on in the area and, more particularly of who was abusing heroin, pushing it and so on; second, the quality of being trusted by the heroin users, and of being able to establish a rapport with them; and third, a willingness to cooperate in an investigation..." (Dean (i) G., et al 1985)

The MQF study proceeded through four stages:

Firstly the identification of the target group and secondly establishing that those identified had a settled address within the ward, between the years 1979 and 1985. Thirdly the administration of the questionnaire and fourthly establishing the reliability and validity of the data obtained at interview.

Identification of the target group

In 1984, a study of the number and characteristics of drug users attending a local general medical practice was undertaken by the author of this study. Thirty-eight of the sixty-seven who had attended the practice with a drug related problem in the previous five years had an address in MQF ward (O'Kelly F., et al 1986).

The author was a member of the steering committee of the Youth Development Project (YDP), which was set up by the local community in MQF ward, to address the escalating drug problem amongst its youth. A sub-group of this committee comprising two voluntary community workers who lived in the area: a social worker and a priest who served the community, had compiled two separate lists of people that they believed were using heroin, for the years 1981 and 1983 and living in the district. This study had the full support of the YDP committee and so the researcher had access to the names on these lists. This numbered 61, some of whom were already known to the researcher. Additional names were suggested by other health and welfare personnel, that is, community based nurses, social workers, drugs counsellors, and doctors. Further names were put forward by those being interviewed during the course of the study. A total of one hundred and eleven names were collected from these various sources.

To establish the residency of the named individuals for the years 1979, 1981, 1983 and 1985.

Those agencies and individuals that had supplied names to the study were also able in most cases to supply addresses for those so named. This information was augmented from the researchers own clinical records. Further each respondent was asked for information about his/her current and past settled addresses at the start of each interview. A small number of those named were found not to fulfil the residency criteria and were therefore not interviewed; their inclusion would have distorted the prevalence figures.

Administration of the questionnaire.

A structured questionnaire (Appendix 1) was designed to cover three broad areas:

Social and family history: that is age, marital status, and number of children, educational record, employment history, legal history and family history.

Drug use history that is smoking, drinking, opiate and other drug use history, such as variety, frequency of use and route of delivery.

Medical history i.e. general medical history, medical sequelae secondary to injecting drug use, use of medical and dedicated drug treatment services.

The reliability and validity of the interview data:

It is now accepted that drug users can be reliable informants about their lifestyle, drug usage and problems (Ball J.C.1967). Bradshaw in his 1983 study on the prevalence of “heroin abuse” in North Central Dublin discussed the question of validity of the interview data in that study and stated that

“ A mere willing participation in the completion of a heroin-positive questionnaire in respect of himself would be very strong evidence that the person in question was indeed a heroin abuser: possession and use of heroin are serious illegal activities, and it is difficult if not impossible to envisage what circumstances would encourage a heroin non-user to admit to use of the drug (and therefore possession)” (Bradshaw J. 1985)

In this study corroborative evidence was sought from the records of the only drug treatment facility in the city and also from the medical records in the researcher’s own practice. At this time there was very little opiate prescribing by doctors for addiction problems other than those doctors working in the Drug Treatment Centre, as this was actively discouraged by the Medical Director of this unit, the Medical Council and the police. (Kelly M.1985)

The findings of this study form the first part of the result section, as it establishes the basic data about the cohort for comparison over the decade 1985 to 1995.

Chapter 5

RESEARCH METHODS IN PROBLEM DRUG USE STUDIES

This chapter describes the main research methods used in problem drug use studies. It highlights the various strengths and shortcomings of these methods and how the present study fits into this framework. The application of these methods in identifying the current position in the United States and Europe is then outlined and then the history of research and policy formation in Ireland is discussed.

Hartnoll in his review article “Opiate: prevalence and demographics” suggests that there are two broad approaches

“to measure the prevalence and profile of problem drug use “ (Hartnoll 1994).

The first involves surveys of representative samples of the general population. Such surveys would include censuses, household surveys and school or college surveys. The second approach involves the use of more targeted methods which focus on particular patterns of drug use in a certain subgroup within the population. As the percentage of drug users within the population is relatively low, general population studies measuring drug use, especially heroin users, are in effect largely studies of non-users. The household and school surveys from America and Europe show self-reported prevalence of heroin use to be less or near to 1% of the population and the rate of recent drug use is lower still (Korf 1995, Hartnoll 1994). The information from such studies is therefore of limited value in that very large samples are needed to obtain enough cases for analysis. As heroin use is illegal and a stigmatising activity it is likely to be under-reported in such studies (EMCDDA 1997). However repeated surveys over time using the same methodology do provide a useful indication of trends of heroin use (Hartnoll 1994, Korf 1995).

The second approach of using more targeted methods aimed at specific subgroups is more efficient in achieving large samples and therefore will generate more extensive and reliable data in the groups studied. However there are obvious limitations to such studies in that the groups may not be representative of others and it is therefore difficult to generalise from the conclusion of such studies. The various types of study, which have been used to describe the prevalence and characteristics of opiate users, are case registers (Robertson 1984, O’Kelly 1986), active case finding techniques (O’Mahoney 1986, 1995), samples (Korf 1995), ethnographic research (Korf &

Wiebel W. 1990) and statistical estimate techniques such as capture-recapture (Drucker 1989, Korf 1995, Bloor 1991, Frischer 1991 & Commiskey 1998).

The present study, which was initiated in 1985, is an active case-finding study - in that the researcher set out to identify and interview all the drug users in one small geographic area. It also borrows from other research methods in that the researcher could be seen as a “privileged access interviewer” (Griffiths 1993) as he works as a general practitioner in the area and was actively involved in promoting and supporting a community response to the emerging drug problem (O’Kelly 1986). Local community activists saw him as someone they could trust and who had the community’s best interest at heart. The researcher also used the “nomination technique” in that each person identified and interviewed was asked to nominate others who also used drugs and lived within the same area. Dr Geoffrey Dean, then director of the Medico-Social Research Board, described the method used as “sandals epidemiology” (Dean G. - personal communication). This method is now more commonly termed “snowballing” in that a person is asked to identify another with a similar problem or condition (Korf DJ. 1995)

Whilst the study uses methods from other types of research it is also unique to general practice in that it uses the privileged access that only a community based physician can evoke. The problems of this methodology are those of other ethnographic studies, which attempt to study “hidden populations” that is those populations which are not obvious to or easily accessible through other methods. Stimson and Oppenheimer, in their study on heroin addiction in London (1969-’79) outline some of the difficulties in conducting qualitative research with drug users over time:

“There is no easy way to do research. Despite the recipes offered in the research textbooks, the actuality involves countless decisions about what sort of material to collect, how to collect it, how to use it, and how to write about it. Data do not just appear before the investigator, to be collected and then reported for the reader. Rather we think it more realistic to view data as actively generated, assembled, or produced. Research is a way of acting on the world, and because we can act on the world in so many different ways we can therefore produce different accounts and versions of it. Hence when we come to undertake a study of what happens to heroin addicts, the way we proceed becomes an exercise in method.”

(Stimson, G. Oppenheimer, E 1982).

The potential problems with such research have been summarised by Griffiths et al as follows: (Griffiths 1993)

“The problem of resources.

The work is time consuming and labour intensive. The researcher often has to work slowly in building up the trust of the study population to gain access for interviewing and observation.”

In this study such trust had largely been achieved by the researchers work as a doctor serving the community from which the study population emanates.

“The problem of idiosyncrasy.

The focus is on small networks that may be distinct ... The need for generalisation requires consideration of the extent to which a subcultural population may be considered representative ... can lead to peculiarities of the selection process which might be distorting.”

There is in deed a question as to whether the cohort identified in the Merchant’s Quay Ward can be considered representative of Dublin drug users. This is explored in comparing and contrasting this cohort to a representative sample of other Dublin drug users who attended the Drug services in 1985. (Study 2)

“The problem of cohesiveness.

...Any sampling strategy that exploits subcultural networks will work best in those groups that exhibit a high degree of social cohesiveness. Individuals who shy away from group involvement may be missed or under represented”

The Merchant’s Quay F cohort are by definition from the same area. Many are also blood relatives and so share a high degree of social cohesiveness. Further the study set out to identify all the drug users within the area and not just a ‘representative’ sample.

“The problem of distortion.

Studies of such groups tend to focus on accessible and vocal elements of a subculture.”

In order to establish whether the group interviewed is representative of all drug users in the Merchant’s Quay F Ward a study of the non-respondents was undertaken from available clinical records.

“The problem of quality

Findings may be heavily influenced by the quality of the researcher.”

In this study the researcher is a medical practitioner, working within the target community, with a history of research into problem drug use and other medico-social problems. Whilst this might seem to be advantageous it could also have introduced bias into the study (O'Kelly 1986, &1988).

The study described in the following chapters strives to avoid some of the more obvious pitfalls of the methods above.

Prevalence of drug use in the USA and in Europe.

If we now look at the practical application of such methods to the study of problem drug use in various situations and countries it is seen that in USA "National household surveys" of populations over the age of 12years old have been conducted regularly since 1971. There have also been annual "National surveys of high school seniors" since 1975 (Hartnoll1994). These surveys give some idea of trends of drug use over time. The lifetime prevalence of heroin use as reported from the "National households" surveys has been around the one-percent (1 %) mark since 1971. Recent drug use, defined as drug use within twelve months, is considerably less and current drug use, that is drug use within the last 30 days, is too low to have any reliability. Whilst life-time prevalence has remained stable the prevalence for specific age groups have changed: for instance in the 18-25 year age range the prevalence declined from a high of 4.6% in 1972 to 1.2% in 1982 and 0.6% in 1990. However lifetime prevalence increased in the older age group during this time reflecting the ageing of the cohort who used heroin in the 1970's.

These trends are supported by the high school surveys, which show a decrease in lifetime prevalence from over 2% in 1974 to around 1% in the 1980's. The last twelve months prevalence' also fell from 1% to 0.5%. At the end of the 1980's there were signs of increasing heroin use in 12-17 year olds in certain ethnic groups such as black and Hispanic American youth (National Institute of Drug Abuse, 1988,1989 and 1991). By the mid 1970's the prevalence of heroin use, was estimated to be about 500,000 heroin users in the USA or 250 per 100,000 of the population. This estimate was based on more targeted methods, that is by collecting data from more focused, problematic or dependant users, that is using ethnographic methods (Hartnoll 1994). Prior to the enactment of the Harrison Act of 1914, which effectively outlawed the use of opiates for non-medical reasons, there were estimated to be 250,000 opiate users in America. The number of heroin users had doubled in the intervening sixty years. This

figure was estimated to be 900,000 by 1985. The 1991 household survey estimated that 700,000 had used heroin in the past 12 months alone (National Institute of Drugs 1991). Since 1990 there are reports of an increased availability of high purity heroin and that its price is falling (ibid).

Hartnoll concludes that the extent of problematic heroin use in the USA probably lies between 600,000 and 1,200,000 persons or 300 to 600 persons per 100,000 of the population (Hartnoll 1994).

In Europe the picture is less clear. The European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) is presently grappling with the problem of trying to unify data collection schemes in the various countries so that it can present an equivalent picture of the situation across Europe (EMCDDA 1997). Most adult general population surveys suggest a life time prevalence for heroin of about 1% or less (Korf 1995, Hartnoll 1994 and Sandwijk 1991). This runs to about 2% for young adults, 1% to 3% reported in three studies (Sandwijk 1991, Cattaneo et al 1993 and Korf 1995). In some European clinics the lifetime prevalence amongst young people appears to be high, in Madrid the level is 4-5% and in Lisbon it is 5-6% (Madrid 1990, Rodrigues 1988).

Using more targeted methods it is found that in some northern European cities such as Amsterdam, Copenhagen, London and Paris heroin addiction amongst groups of young people first began to emerge in the 1960's and the early 1970's. However it was not until the late 1970's and early 1980's that there was a major increase in prevalence of heroin use in most Western European countries (EMCDDA 1995). This prevalence appeared to level off by the mid-1980's and then rise in particular countries thereafter, notably Germany, France, Portugal, and Greece. Spain and then Britain quickly followed these countries (ibid).

However few European countries have reliable prevalence estimates for heroin use in problematic/dependent users. Hartnoll makes a personal 'guesstimate' that suggests in the European Union (pop 350 million) there are between 500,000 and 1,000,000 dependent or problematic drug users. He suggests that there are between 150 and 300 heroin users per 100,000 of the population across Europe, however these figures would be significantly higher in some cities and countries and lower in others. This is less than the figure for the USA (Hartnoll 1994).

Research and policy formation in the Irish context

Prior to 1970 there was little evidence of illicit drug use in Ireland. A study in the mid-1960's showed that 0.9% of admissions to psychiatric hospital were due to amphetamine dependency, there were no admissions for opiate dependency (Walsh D 1966). The Department of Health working party on drug abuse (1969) reported that there were about 350 persons abusing drugs and that these drugs were primarily amphetamines and barbiturates. These drugs were obtained mainly from "raids on pharmacies" (Dean (i) G. et al 1985). Through the 1970's there was an increase in the use of opiate and synthetic opiates such as dextromoramide and dipipanone, which again were got from pharmacies and a small number of doctors (Dean 1985, O'Gorman 1998).

The ready availability of large quantities of heroin on the world market following the Iranian revolution led to the importation into Ireland of some of this heroin. Criminal elements moved in quickly to control the supply of heroin and it was marketed in the more deprived areas of Dublin's inner city, both north and south of the River Liffey (O'Kelly 1988, Dean 1985).

The increasing numbers of drug users attending the only drug treatment centre in the country is evidence that there was a dramatic increase in heroin use at this time. This drug treatment centre was first based in a pre-fabricated building placed within the Jervis St hospital site in central Dublin. The average attendance in 1979, for heroin use, was 5 per month and by 1983 this had risen to 239 per month. In all 2,057 people attended the drug treatment clinic for the first time between 1979 and 1987, 1440 because of opiate use problems (Trinity Court). During this time the number of younger people, aged between 12 and 19 years, increased dramatically from 11 (6%) in 1979 to 203 (19.7%) in 1983. In 1979 103(46.5%) of those attending the Drug Treatment Centre were 25 years and older by 1983 the percentage of older users had fallen to 39% although the total numbers had risen to 513 (39%) - in other words the percentage of new younger users seeking help was dramatically increasing.

From the criminal justice perspective there was evidence of a growing problem with heroin use, in that five persons brought before the courts were charged with offences involved with heroin in 1979. This rose to 47 persons in 1980 and 177 persons in 1981 (Report on crime 1982, Dean G. 1985).

In 1982 the Minister for Health in response to anecdotal evidence of an increased drug problem in Dublin City commissioned the Medico-Social Research Board to instigate a prevalence study in four areas of Dublin City and in three other towns and cities, that is Sligo, Galway and Cork. This report was published in 1983 and is generally known as “The Bradshaw Report” named after its author. In the end Bradshaw was only able to complete one study in Dublin’s north inner city. The chief finding was that 10% of the population in the 15 - 24years age group had used heroin in the years since 1982. Other findings were that 95% of heroin users identified were less than 24 years old, 93% of heroin users said they used on a daily basis and that 74% said that intravenous use was the preferred route of administration (Bradshaw 1985).

This report and the publication of the paper “The opiate epidemic in Dublin 1979-88” finally made the general public and health authorities aware of the existence and possible scale of the problem of heroin use in the city (Dean 1985). Two other community studies, one in the south inner city area and one in DunLaoire were completed and supported Deans findings (O’Kelly 1986, Power 1986).

However the statutory bodies reaction to these findings could at best be described as careful and uncertain. In many ways the authorities reacted, as did the general population, with alarm but inaction. Drug abuse and abusers were unpopular; most people hoped the problem would just go away or that it could be dealt with by increasing police attention and the existing medical services (Greenwood 1992, Bury G 1991). Shane Butler in his seminal paper “Drug Problem and Drug Policies A Quarter of a Century Reviewed” describes the official reaction and the development of policy to deal with the emerging drug problem. He attempts to explain the genesis and formation of this policy in the light of the prevailing social and political views (Butler 1991). The first major change in policy was brought about by the realisation in 1985 that a high percentage of drug users were HIV antibody positive; 30% of injecting drug users were HIV positive (DOH statistics). Slowly but surely a harm reduction policy, a public health strategy emerged to try to contain the virus to certain risk groups. It became apparent that untreated drug users, because of their high exposure to HIV infection, were a real threat to the general population (O’Gorman1998).

The study described in the subsequent chapters is based in one community conducted at two points ten years apart. It details the experience of a cohort of drug users over a 16-year period. It is unique in the Irish context and adds to our understanding of the factors closely associated with problem drug use. It should inform the present drug services of areas of need, which still have to be addressed.

Chapter 6

AIMS, OBJECTIVES AND METHODS:

The aim of this thesis is to determine the natural history and consequences of injecting opiate use in a cohort of drug users. In order to accomplish this the work is divided into three sections. The first describes the main characteristics of the cohort and changes over time (Study 1), the second compares this cohort's experience with that of other Dublin drug users (Study 2), and the third compares this cohort with others, not known to be drug users, but living in the same community (Study 3).

A review of the main characteristics of a cohort of heroin users over the ten year period 1985 to 1995. (Study 1)

The objectives are:

- a) To establish any change in the socio-demographic background and characteristics of this cohort over a ten year period. To describe the change in drug use in the same time period (Study 1a).
- b) To determine the mortality in this cohort over a ten year period (Study 1b).
- c) To determine the extent of HIV infection in this cohort. Further to review the range and extent of other medical problems, including other virus infections, and determine the use of medical services by this cohort (Study 1c).
- d) To describe the changes in certain 'risk behaviours', such as drug use, needle sharing, and sexual practices over this time period (Study 1d).

Study 2 and 3 were executed in order to put the natural history of this cohort into the context of its drug using peers in Dublin, and into the context of its local community.

To compare and contrast the experience of the index cohort to that of other Dublin drug users. (Study 2)

The objectives are:

To measure any differences between the index cohort and other Dublin drug users from the same era, that is "known¹ to the drug treatment services in 1985.

The important areas for comparison are (a) socio-demo graphic characteristics (b) drug use history (c) mortality and (d) HIV disease

To compare and contrast the experience of the index cohort to others from the Same community, of the same age, who were non-drug users in or before 1985. (Study 3)

The objectives are:

To establish any differences between the index cohort and a sample of non-opiate users drawn from the same community, who are within the same age range and therefore subject to many of the same life influences.

The important areas for comparison are (a) socio-demographic characteristics (b) drug use history (c) mortality (d) HIV disease

Methods

Study 1

There are two main sources of data for this study. The first source is the structured questionnaires, one in 1985 and the second in 1995. These questions focus on the individuals socio-demographic characteristics, family background, and education, their work history, experience of the criminal justice system, past and present medical problems and drug use history. The emphasis in the questions is on relatively simple, unambiguous objective information in the main, although some room was given for subjective comments by the interviewee (See Appendix 1 and 2).

The second source of data for the study is from a variety of clinical records. The majority of the cohort has a medical record at Trinity Court, the oldest and largest drug treatment centre in the State and the only centre for such treatment in 1985.

As a majority of this cohort were or became patients in the author's practice, within a short time of completing the first study in 1985, there are medical records available from this source. Another source of clinical records were those held in the Genito-Urinary Medicine service in St James's Hospital, which has provided dedicated care for HIV sero-positive individuals since 1987. This was the only service providing such care until recently, and is still providing such care for the area south of the River Liffey, which bisects Dublin City. Finally there are laboratory records of HIV and viral hepatitis testing available from the National Virus Reference Laboratory, University College Dublin; however the Virus Reference Laboratory would only release total figures on the study group and not individual results.

In all there are additional clinical records available for study on all but two of the cohort. For some individuals there were clinical records held in all three sites, so for the purposes of the study the relevant clinical information is that which is the most recent in time, especially when this is supported by laboratory findings.

Study Design:

This is a descriptive longitudinal survey over ten years of eighty-two injecting drug f; users from one Dublin District Electoral Division (DED) who were first identified in 1985.

The Study Population

The Merchant's Quay F (MQF) study (1985) studied the prevalence of drug use in one District Electoral Division (DED) of Dublin city. This identified a population that were thought to have a history of injecting drug use; all those available were interviewed. All gave a history of injecting opiate use and had a settled address within the MQF DED prior to 1985. This study was completed in 1985, prior to HIV testing being available in Ireland. The group identified and interviewed in 1985 forms the study cohort.

Methods used

In order to determine changes in the main characteristics of the study population during the ten-year period it was necessary to re-interview the cohort using the same questions as used in 1985 questionnaire. Information on those who were not available for interview, through death or who could not be found, was obtained, where available, from clinical and public records.

Since 1985 the researcher has maintained contact with the majority of this group both formally and informally. The majority of the group became patients of the researcher's medical practice by 1985 study and so contact was maintained. Informal contact was maintained with most of the other fourteen of the group through their family members, local community workers, drug addiction counsellors and other medical services. This method was used as 'formal' tagging of patient's medical records is not available in the Irish health care system as it is in other jurisdictions (Robertson R. 1994).

Timescale:

The follow up interviews were started in May 1995, ten years after commencement of the original interviews. The original interviews took six months to complete, but the second interviews took one calendar year to interview those alive and available for re-interview. The researcher took six weeks study leave from practice to initiate this review. Information from death certificates was collected from the Office of the Register General in Ireland and the General Registrar's Office in London. This work started in April 1997 and was completed in July 1997.

Administration of the questionnaire.

A structured questionnaire was designed to cover the same three broad areas as the 1985 MQF one but expanded to include additional questions on HIV infection and behavioural changes over the decade (See Appendix 1).

The main areas of inquiry are:

Social and family history. Age, marital status, number of children, education record, employment history, legal or forensic history and family history.

Drug use history. Use of tobacco, alcohol, marijuana, cocaine, lysergic diethylamide, opiates and other illegal drugs. Details were sought as to the variety, frequency of use, and route of delivery.

Medical history. General medical history, medical problems arising secondary to injecting drug use, use of medical and dedicated drug treatment services. Specific reference was made to HIV infection and other viral infections.

Behavioural changes. Use of condoms or other protective sexual practices; needle exchange and sharing of injecting materials

Ethical considerations

In 1985 the original cohort was given verbal assurances of complete confidentiality of any information divulged. This was repeated when the cohort was re-interviewed in 1995. No member of the cohort refused an interview when approached in person by

the author. Any member of the cohort who wished to have a copy of the completed questionnaire was forwarded the same. The researcher is the only person to have access to the names of the various groups and the information remains confidential, in his care.

The purpose of the questionnaire was fully explained to the respondents prior to interview, as it was in 1985. They were advised that corroborative information would be sought from the records of the drug treatment services.

The author was conscious of the need not to add to the burdens of this group and therefore attempted to make the interview process as easy as possible, the questionnaire being completed in the place most convenient to the respondent and at a pace which was comfortable to them. No respondent found the process difficult; in fact many seemed pleased of the opportunity to talk about themselves, their lives and their problems.

The Ethics Committee of the Irish College of General Practitioners granted approval for the study.

Pilot study:

A pilot study was undertaken in 1995 to test the acceptability and appropriateness of the questionnaire. Four patients of the practice with long histories of problem drug use, from the Dublin 8 area but outside of the Merchant's Quay F Ward which is within Dublin 8, agreed to be interviewed by the researcher. The patients found the process acceptable, and were willing to participate even though questioned about illegal acts, sexual history and prison records. The only adjustments made to the final questionnaire were linguistic, that is clarifying and simplifying language.

The Interviewer

Consideration was given to using a previously unknown researcher to carry out the interviews. However the unique circumstances of the individuals and problems dictated that the researcher should be known and acceptable to the respondents. The author is such an individual who is known and trusted in the community and additionally could offer the security of medical confidentiality. Throughout the study period the author's general practice had a formal policy of non-prescription of opiates for the treatment of opiate addiction. However patients with drug related problems

were welcome in the practice, and were referred to specialist drug treatment services, as appropriate. Normal general practitioner services were provided for all other problems presented. No inducements were offered to participate in the study.

Non-responders study

In order to determine if the non-responders are different to the responders group it is important to establish some base line data on the non-responders group. Their names and last known address (1985) were forwarded to the Trinity Court Drug Treatment service in 1999 to establish if any of them was known to that service. The information sought on the individuals was their date of birth, gender, address and history of heroin use.

To determine the mortality in this cohort over a ten year period. (Study 1 b)

Death records are a matter of public record and any one record can be accessed by any member of the public if they know the name of the individual and the date and place of death. However, in order to access a large number of records for research purposes permission has to be sought from the Minister of Health, as the Office of the Register General is part of the Department of Health.

Permission was sought in writing from the Minister of Health, and granted under the proviso that:

“The Minister consents to the release of the necessary information subject to the conditions that strict confidentiality be observed with regard to information obtained, that relatives of the deceased are not contacted and that in any published work it would not be possible to identify any individual or individuals.”

A colleague, based in London, went personally to the General Register Office in London and applied for and forwarded copies of the death records of the two individuals who died in England.

To comply with the Minister’s proviso, the name and surname of the individual, and the date and place of death is not recorded in this document. Place of death is recorded as ‘home’, ‘hospital’ or ‘other’. Date of death has been substituted with ‘year of death’.

The death record is laid out in the following format:

“date and place of death”, “name and surname”, “sex”, “condition”, “age last birthday”, “rank, profession or occupation”, “certified cause of death and duration of illness”, “signature, qualification and residence of Informant”, “when registered”, “signature of registrar” (Appendix 2).

“condition” on the record refers to civil status.

“rank, profession or occupation”; the official convention is that this column is left blank if no rank, profession or occupation is nominated by the informant, however the term unemployed is often entered where the deceased had no obvious occupation.

To measure any differences between the index cohort and other Dublin drug users, known to the drug treatment services in 1985 (Study 2)

Method:

A comparison cohort of individuals attending the drug treatment centre from within the Dublin City boundaries whom gave a history of opiate use, was identified from the records of The National Drug Treatment Centre. It was decided to exclude any individual from Merchant’s Quay F Ward from this comparison cohort, so that local differences would not be obscured.

The National Drug Treatment Centre (previously an annexe of Jervis St. Hospital) was the only drug treatment service in the state in 1985. This centre is now sited at Trinity Court and the service is now more usually known as Trinity Court. It is known from earlier community based studies that between 80 to 90% of all drug users identified in these studies had attended the Drug Treatment Centre services and therefore there were records available (Trinity Court). The researcher, with the permission of the Board of the National Drug Treatment Centre, at Trinity Court, applied to the medical director for permission to review charts of any patient who attended their service in 1985. A simple data collection instrument was designed to collect specific information on each individual, that is demographic detail, history of drug use, hepatitis and HIV infection and mortality. In transcribing this information the author made this information anonymous by allocating a study number to each individual record. No information on any one individual is used, but rather pooled information, as a group, will be reviewed.

The number of individuals attending the Drug Treatment services in 1985 was 1424, of whom 798 gave a history of heroin use. A random sample of one hundred people attending the service in 1985, who did not have a settled address in Merchant's Quay F, was taken to be an adequate representation of drug users using the service that year. However the whole year was not taken as HIV testing was introduced to Ireland in October 1985, and people attending the service after this time could have been motivated by their need to know their HIV sero-status. The number of patients attending the Drug Treatment services with a history of heroin use and who gave a Dublin address, between January 1st and August 31st 1985, is 359. The sample of one hundred records of individuals, all of whom attended the centre between January 1st to August 31st 1985, was drawn using a random numbers scale. This represents a random sample of between 1 in 3 and 1 in 4, (1:3.6 or 28%) of the possible 359 records. Fortunately 1985 is the first year that the Drug Treatment service, Trinity Court, has computerised records of those attending its service. Any patient from the MQF cohort was excluded from this group and a new record sought using the next random generated number. The group so identified is known as the "Trinity Court cohort".

A similar data collection was undertaken using the records held in Trinity Court on those of the MQF cohort who had ever attended the drug treatment service. No information known to the author from other parts of this study was entered into this new record. This group is known as the "MQF cohort at Trinity Court".

Thus it is possible to compare these two cohorts as only information drawn from the same source is used.

To establish any differences between the index cohort and an age matched sample of non-opiate users drawn from the same community. (Study 3)

Method:

A comparison cohort of residents living in the MQF ward who were not known to be drug users in 1985 was identified within the researchers general practice. The practice is a three-doctor service and teaching practice located close to the MQF ward. The practice has been in continuous service since the 1950's and this researcher joined it as a Principal in 1978.

The comparison group consisted of all residents of the ward known to the practice in 1985 who were age matched with the original cohort.

This group was identified in 1996 using three separate reviews of all current and inactive medical records.

Since 1978 it has been standard practice to maintain detailed clinical records on all patients attending and to retain these records in the event of a patient moving out of the area or on the death of a patient. Under the National Health System in Britain medical records are the property of the Family Health Services Authority, which is the administrative arm of the General Practitioner service. Patients' records must be returned to this body if a patient moves away or dies. In Ireland, medical records remain the property of the doctor. When a patient moves away and the patient or his/her new doctor requests clinical details a summary of the relevant notes is made or photocopied and forwarded to the doctor. A secondary filing system to store files not in current use has been established within the practice.

The researcher did a manual search of all records, current and in the secondary system, to identify patients who had lived in MQF in 1985. The secretarial staff repeated the search and this provided some additional records. The author then undertook a third manual search but no new records identified. This procedure identified 100 individuals aged between sixteen and thirty years in 1985, which matches the age range of the original cohort.

This community comparison group forms the basis for the objectives of Study 3 to be explored. The same data collection instrument as used for the "Trinity Court" cohort was used to capture basic demographic data, employment status, history of smoking, alcohol use, drug use, history of HIV infection or risk of infection, and mortality.

Vital statistics are available for district electoral areas from the Central Statistics Office (CSO 1981, 1986). Vital statistics from the ward Merchant's Quay F were obtained for the years 1981, 1986). Vital statistics from the ward Merchant's Quay F were obtained for the years 1981 as the original study looked at drug use between 1979 and 1985. This will allow comparisons to be made between the original cohort, the community group identified from the practice and the data available for the MQF ward from the census figures.

Analysis

A word processing, database and statistics system Epi-Info 6.02 has been used to generate the various data collection instruments, to store the data and analyse this using the appropriate statistical methods (Epi-Info).

Chapter 7

RESULTS

*“Live in contact with dreams and you will get something of their charms:
Live in contact with facts and you will get something of their brutality.”*

George Bernard Shaw, from John Bull’s Other Island 1904.

Study 1a: (i) 1985 Questionnaire

A total of 111 names of individuals known or suspected of using opiates were collected by the author from the various sources previously mentioned (see pages SI-52). Eight of the 111 individuals were found not to meet the residency criteria and were excluded. This left a list of 103 names that were the target group for this study. Dr. F. O’Kelly identified thirty-eight persons, who had used heroin and lived in Merchant’s Quay Ward F, from a previous audit of his own practice (O’Kelly et al 1985). A sub-committee of a local Youth Development Project, consisting of a Health Board social worker, a local Catholic priest, and two community workers had two lists of names compiled in different years that were known or thought to be using heroin. Fifty-seven names were identified from the first list compiled in 1981 and 39 from one in 1983. These two lists supplied additional 49 names to the 38 already identified from the researcher’s practice. Further names were suggested by health and welfare professionals working in the area, such as public health nurses, social workers and an area drug counsellor. This amounted to 10 further names. The respondents were asked, at the end of the interview, to nominate people who they knew to have also used heroin. This resulted in a further six names who fulfilled the criteria. The names of 103 individuals were identified as having had a settled address in Merchant’s Quay F and in the view of the key informants were likely to have used heroin on a regular basis over a period of a few months (See Table 7.1).

Table 7.1: Key Informants (1985)

Source	Number (%)
Local sub-committee	49 (47.6)
Local General Practitioner	38 (36.9)
Health and welfare workers	10 (9.7)
Interviewees	6 (5.8)
Total	103 (100)

Eighty-two (80%) questionnaires were completed out of a possible 103 (See Appendix 1). The researcher completed 70 (85%) of these 82 questionnaires in face to face interview with the desired respondent. A Health Board social worker, working as an addiction counsellor, completed a further two (2%) questionnaires with a couple known to her as they were not prepared to meet with the researcher. This social worker studied the questionnaire in the presence of the researcher prior to her interviewing the couple. The researcher interviewed the spouse or sibling of a further seven (9%) of the respondents, as they would not agree to take part in a direct interview but gave permission for the spouse or sibling to answer the questionnaire with the researcher. Five of these were completed by the spouse, in each case the desired respondent was in the house at the time of the interview and available to the spouse. In a further two cases a sibling of the desired respondent completed the questionnaire and were confident in their replies. Three (4%) questionnaires were sent by post, two to a married couple and one to another individual, all with an address in England. The couple completed the questionnaire with the help of a local priest. All three individuals were patients of the researcher's practice prior to their move to England; the questionnaires were returned completed.

The researcher interviewed 82 of the target list between 1st of May and the 31st of October 1985. The gender break down is 62 males to 20 females. Twenty-one, of the 103 identified as possible heroin users, were not interviewed as they either refused interview or could not be found by the researcher; these are the non-responders. The non-response rate was 20.4% (See table 7.2).

Table 7.2: Non-responders - Reasons for Non-Response

Reason for non-response	Number (%)
Moved from the area (no forwarding address)	9 (8.7)
Refused to be interviewed	10 (9.7)
Moved to England (postal address known, two letters sent but no reply)	2(1.9)
Total	21 (20.4)

In order to determine if the non-responders were different to the responders some basic information was sought about them from the records of the Trinity Court Drug Treatment Service. A list of their names and last known address (1985) was

forwarded to Trinity Court to establish if any of them were known to the service. Twenty of the 21 have a record of attendance at Trinity Court and data is available as to address, age, gender and drug use history. Only one of the group is not known to the Trinity Court service, which was the only drug treatment centre in the country in 1985.

The two groups have similar age-ranges ($\chi^2=2.36$, $p=0.50$).

A comparison is shown in table 7.3 below.

Table 7.3: Age of Responders and Non- Responders.

Age range	Responders	Non-Responders
15-19 years	4 (4.9)	2 (10)
20-24 years	43 (52.4)	7 (35)
25 - 29 years	24 (29.3)	7 (35)
30 years and over	11 (13.4)	4 (20)
Total	82 (100)	20 (100)*

* No information is available on one of the non-responders

There are 15 males and five females in this group. The ratio of male to female is similar to that found in the responders group, that is 15m to 5f (3: 1) in the non-responders group and 62m to 20f (3.1: 1) in the responders group.

All 20 have a recorded history of heroin use by injection in the Trinity Court records and all had an address within the target area. In three important areas, age, gender, and heroin use, the responders and non-responders are similar. Therefore it is reasonable to conclude that the results of the analysis of responses to the questionnaires are not biased to any significant degree by the absence of questionnaires from the non-responders group.

Place of interview: The researcher had to make repeated efforts in a variety of different settings over a six-month period to effect these interviews. Initially he took six weeks study leave from the practice in order to initiate the study. At the time of interview 18 respondents were interviewed in prison, with a further two on ‘temporary release’ from prison being interviewed in their homes. A further five were resident in the Coolmine Therapeutic Community in Navan, Co. Meath. Coolmine is a drug free residential rehabilitation unit for persons with a history of problem drug use; it is run by a voluntary organisation supported by government funds. Others were interviewed

in their homes (n=39), the author’s medical practice premises (n=8), a priest’s house (n=3), community offices (n=4), a hospital ward (n=1), and in the researcher’s car (n=2). Some of these interviews were pre-arranged and others were completed ‘in the field’ that is at the time of meeting the respondent, at the place most convenient to all concerned. This accounts for the varied places used for the interviews.

Prevalence: All 82 gave a history of injecting heroin use at interview. Of these 76 were known to the only drug service in the city to have a history of heroin use by 1985. The other six individuals had attended the author’s medical practice with problems related to injecting heroin use, so there is corroborative evidence of injecting heroin use in all 82 persons interviewed. The total population of Merchant’s Quay was 3241 persons in 1981, according to the census figures for that year (CSO 1981). As all 82 respondents confirmed regular heroin use, this gives a prevalence of ‘ever heroin use’ in this community of 2.5% and in the age group 15 to 24 years it is 6.3%. In the male population this rises to 10.7% and in the female population is 3% for the 15 to 24 years age group. In the age range 25 - 34 years the overall prevalence is again 6.3% but the male rate rises to 11.6%. The prevalence amongst males in the age range 19-34 years is 11%. (See table 7.4).

Tables 7.4:Prevalence of lifetime heroin use (Merchant’s Quay F ward in 1985)

Age group	Persons ever using heroin	Population of the Ward	Prevalence (%)
All ages	82	3241 persons	2.5
15 - 24 years	44	694 persons	6.3
15 - 24 (males)	32 males	299 males	10.7
15 - 24 (females)	12 females	395 females	3.0
25 - 34 years	37	592 persons	6.3
25 - 34 (males)	29	251 males	11.6
25 - 34 (females)	8	341 females	2.3
19 - 34 (males)	61	550 males	11.0

Table 7.5 shows the prevalence of heroin use by year and residence in the Ward. Whilst all 82 respondents had lived in the Ward by 1985, that is had an established domicile, there was some movement in and out of the Ward between 1979 and 1985.

All 82 had started using heroin by 1983. Some had stopped by 1983 and by 1985 only 41 (50%) were still taking heroin. The other 41 reported having stopped using heroin for at least one month.

Table 7.5: Numbers of Heroin Users by Year and Residence in the Ward.

Year	No. resident in the Ward	No. resident and using heroin	No. using heroin in that year	No. ever used heroin
1979	75	45	46	46
1981	75	68	74	76
1983	61	52	67	82
1985	45	19	41	82

Table 7.6 shows the year of first heroin use and the number of the cohort first using that year.

Table 7.6: Year of First Use of Heroin

Year	No. of First Time Users (%)	Year (continued)	No. First Time Users (%)
1969	1 (1.2)	1978	12 (14.6)
1970		1979	17 (20.7)
1971		1980	18 (22.0)
1972	2 (2.4)	1981	12 (14.6)
1973		1982	4 (5.0)
1974	1 (1.2)	1983	2 (2.4)
1975	4 (5.0)	1984	
1976	2 (2.4)	1985	
1977	7 (8.5)	Total	82 (100)

This is represented in graph form in Figure 7.1.

Figure 7.1

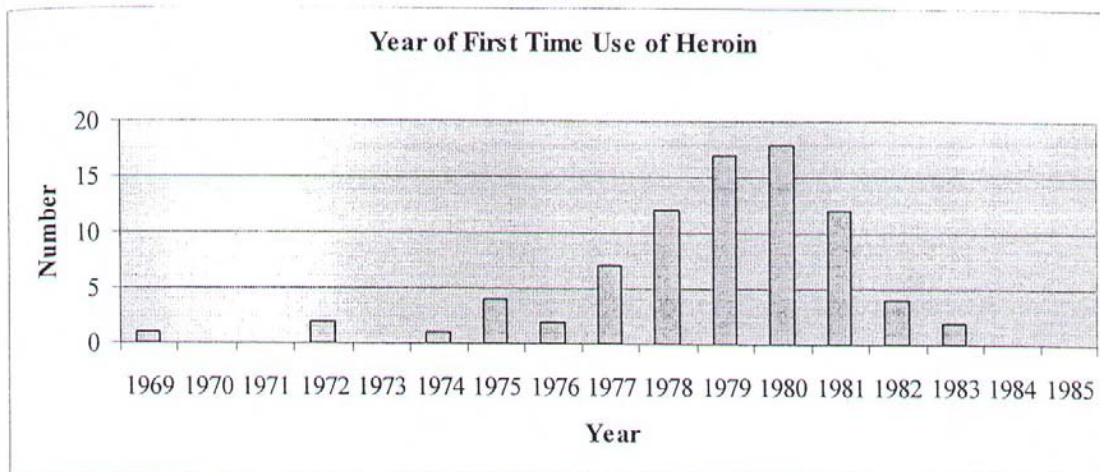


Table 7.6 and figure 7.1 show that there was a hidden population of heroin users prior to such drug use being identified by health care workers. There were 10 of the cohort who were using by 1976 and 29 by 1979, the first year that there is any official documentary evidence of a local drug problem (Kearney T. 1980). The five years from 1977 to 1981 are the years of highest 'first time heroin' usage, with 66 of the cohort giving a history of starting injecting heroin use between these years.

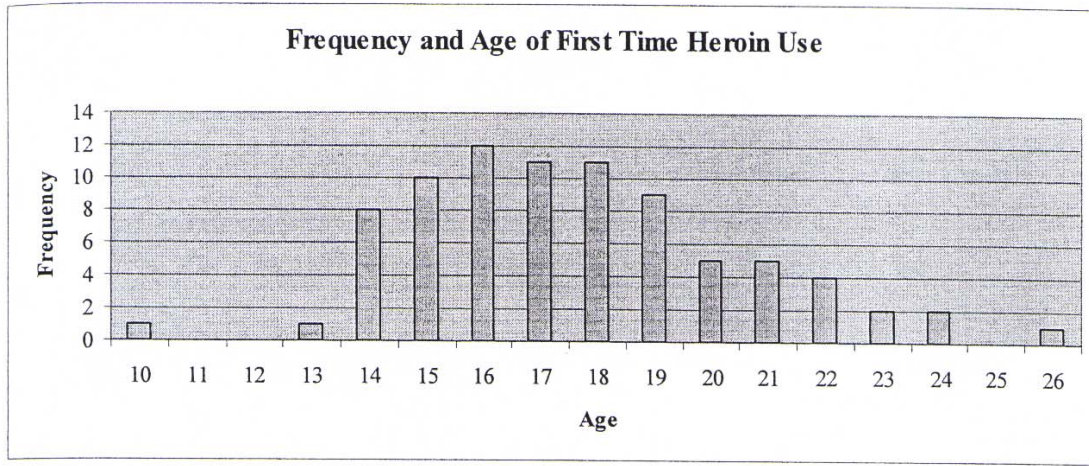
Drug use history: All eighty-two admitted to injecting drug use. Eighty-one admitted to daily drug use. One female respondent claimed to use heroin less often than on a daily basis but more than once per week that is regular use. Table 7.7 shows the age at the first time of heroin use.

Table 7.7: Age and frequency of First Time Heroin Use

Age at first heroin use	Frequency (%)	Age at first heroin use	Frequency (%)
10 years	1 (1.2)	19 years	9 (11.0)
13 years	1 (1.2)	20 years	5 (6.1)
14 years	8 (9.8)	21 years	5 (6.1)
15 years	10 (12.2)	22 years	4 (4.9)
16 years	12 (14.6)	23 years	2 (2.4)
17 years	11 (13.4)	24 years	2 (2.4)
18 years	11 (13.4)	26 years	1 (1.2)

This is represented in graph form in figure 7.2

Figure 7.2



One individual had started to use heroin by injection at the age of ten years. Ten others (12.2%) started to inject heroin by aged 14 years and a further 53 (64.6%) by the time they were 19 years of age. All except one individual had started by age 24 years; this person did not start until he was 26 years of age.

Drug preference: When asked about their preferred drug of use 74 (90%) replied heroin, with four saying Diconal, a synthetic opiate, three saying a mix of heroin and cocaine and one giving cocaine as the drug of choice. The most preferred route of administration in 1985 was by intravenous injection with 73 (89%) of respondents opting for this route, seven (8.5%) replied that ‘skin popping’ or subcutaneous injection as their preferred route and two (2.4%) others gave “snorting” or per-nasal route.

All the respondents gave a history of poly-drug use that is they used a variety of drugs especially if the one they sought was not available to them. The commonest family of drugs used in addition to their drug of choice was benzodiazepines. When asked about the first drug they had used, other than tobacco or alcohol, 54 (65.8%) of the group said cannabis, however 15 (18.3%) said they had started with heroin, and a further 10 (12.2%) said opiates other than heroin. A further two said benzodiazepines and one person said cocaine.

The age breakdown at interview in 1985 is shown in Table 7.8

Table 7.8: Age of Respondents (1985)

Age	Number (%)
< 20 years	4 (4.9)
20 – 24 years	43 (52.4)
25 - 29 years	24 (29.3)
> 29 years	11 (13.4)
Total	82 (100)

The mean age of respondents is 25 years (median = 24 and mode = 24 years.)

The youngest person identified was 16 years old at the time of interview and the oldest person was 37 years. Sixty-two were single, 12 were married and eight were separated from their spouses. Thirty-six lived at their parent’s home, 28 with a spouse or partner, and 18 either alone or with other relatives or friends. Twenty members of the group were married to, or living with another person in the group, that is there were ten couples in the interview group.

As a group the 82 respondents had 68 children between them: 37 had no children, sixteen had one child, 18 had two children, five had three children, five had four children and one had five children - this is seen in table 7.9.

Table 7.9: Numbers of children per respondent (1985)

Numbers of children (per respondent)	Number (%)
None	35 (42.7)
One child	18 (22)
Two children	18 (22)
Three children	5 (6)
Four children	5 (6)
Five children	1 (1.3)
Total	82 (100)

The ten couples in the group had 24 children by 1985. In total the cohort had 68 children between them by 1985 - the ten couples in the group had 24 children. In 1985 only 26 (38%) of the 68 children were living with the respondent, 34 (50%) were being reared by the other (non-drug using) parent, by a grandparent, or other

relatives. Twelve (17.6%) of these children were in statutory care. This shows a high level of absent parenting by many of the cohort, in that 42 (63%) of the children born to the cohort were not living on a daily basis with at least one of their parents.

Education: Thirty-two (39%) of the cohort had left school before the official school leaving age of 14 years. A further 24 (29%) left at 14 years and 19 (23%) at 15 years. Only 7 (8.5%) remained in school after 15 years. Sixty-eight (83%) described themselves as being able to “read well”, however 14 (17%) said they were poor or fair at this task. Only 11 (13%) had taken any public examination and none had a third level education. What emerges is a picture of early school leaving with many of the group finishing formal education with poor literacy skills and little in the way of achievement at any level of public examinations.

Employment: Using the same categories as deployed in the census tables, by 1985 only 10 of the group were in employment, six were awaiting their first job and 50 were unemployed. For 15 women house duties were their main occupation and one individual was unable to work due to permanent disability, see table 7.10.

Table 7.10: Employment status (1985)

Category of Employment	Number (%)
Unemployed	50(61)
House duties	15(18.3)
Employment	10(12.2)
Awaiting first job	6 (7.3)
Unable to work	1(1.2)
Total	82 (100)

There is a high level of unemployment in this cohort, 61% compared with 13% for the same age cohort in the Ward. (C.S.O. 1981).

Family history: The respondents come from families that ranged in size from one to 15 children in number. The mean family size is 8.2 and the median 8.0. Fourteen of the cohort had seven siblings, and 13 had eight siblings. The position of each individual varied in each family, with no particular grouping towards the beginning,

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attended at the drug treatment centre, however all six individuals were patients of the I, researcher's practice, and their admission to regular heroin use is supported by clinical records from the practice.

Thirty-nine (48%) of the cohort had been admitted to the drug treatment centre as an in-patient for one or more detoxification programmes. In total this group of 39 I: underwent 96 in-patient detoxification programmes. A further 54 (66%) had undergone one or more outpatient detoxification programmes, a total of 191 such programmes. Seventeen (21 %) had received both in-patient and outpatient programmes.

Medical problems related to drug use: All 82 had attended their general practitioner, ; the drug treatment unit or one of the city hospitals for a medical problem related to 5 their drug use. Fifty-five (67%) had developed jaundice at some time, 43 (52%) had attended with skin abscesses, and twenty-one (26%) had suffered a respiratory arrest due to an overdose of heroin. Ten (12%) had asthma attacks possibly secondary to ingestion of some foreign powder or other material and seven (9%) suffered epileptiform seizures secondary to sudden withdrawal from heroin. Other problems encountered were seven (9%) cases of sexually transmitted infections and 12 (15%) sought psychiatric help for a variety of disorders. Twenty-eight (34%) of the cohort had a total of 52 admissions to hospital by 1985 for treatment of some of the above problems. There is a noticeable increase in the morbidity within the group after they started to use heroin. Much of the morbidity, such as hepatitis and abscesses are secondary to infection mediated by the sharing of injection equipment.

(ii) 1995 Questionnaire

Twenty-seven (33%) of the original cohort of 82 persons interviewed in 1985 were dead by 1995. Of the possible 55 remaining 50 (91%) were re-interviewed in 1995. Death certificates were obtained for all 27 who had died.

Non-interviewed group: Five (6%) of the original cohort of 82 could not be found to be interviewed in 1995. Two of these five, one male and one female, could not be located despite repeated enquiries through a variety of sources such as family, friends, former neighbours, drug treatment services, welfare services and hospital clinics. The

male had failed to return to an open prison after being allowed leave to attend a family funeral in 1995. Two further people, a married couple, had moved to the North of England according to drug treatment workers, however it was not possible to establish their address, despite repeated enquiries to various members of both families. The last of these five non-respondents a female had moved to London and despite repeated requests through a family member, contact was not made. All of these five are alive according to family members and community drug workers. Although not interviewed in 1995 there is some history on each of the individuals available through clinical notes.

Interviewed group: The author interviewed 49 of the 50 who were available for re-interview, using a second structured questionnaire (see Appendix 2). The 50¹ person available for re-interview answered the questionnaire in the presence of the doctor in charge of her medical care, Dr Dasgupta, a consultant psychiatrist in the drug treatment unit of St Mary's Hospital, London. The author travelled to London to interview this female, as arranged, only to learn that she had availed of a place in a respite unit on the south coast of England the previous day. Doctor Dasgupta agreed to conduct the interview on her return and familiarised himself with the questionnaire in the presence of the author.

Place of interview: The interviews were conducted over an eight-month period from June 1995. Again the interviews were conducted in a variety of settings, dependent on the whereabouts of the respondents. Four of the respondents were interviewed in prison. Permission to interview these individuals was sought and granted from the appropriate authorities, in writing. Two respondents were in Mountjoy prison, one in the maximum-security prison in Portlaoise, and one in Brixton prison in London. Seventeen were interviewed in the author's own practice, 15 in their own homes and six in drug treatment centres in Dublin. Two more interviews were conducted in London, in a drug treatment centre. Three interviews were completed by telephone with respondents living in England. The author knew all three respondents from the previous interviews in 1985. The author made initial contact, and arranged an agreed time to complete the questionnaire. The remaining three respondents were in hospital at the time of the interview, one in a respite hospital care unit. See table 7.11 below.

Table 7.11: Place of interview 1995

Place of interview	Number (%)
GP practice	17(34)
Respondents home	15(30)
Drug treatment centres	8(16), [2* in London]
Prison	4(8), [1 in London]
Hospital	3(6)
Telephone interview	3(6)
Total	50 (100)

- *Dr Dasgupta interviewed one of these individuals

Changes in social / demographic characteristics 1985 -1995

In 1985 three of the cohort were living in England; by 1995 all three had returned to live in Dublin. Since 1985 24 (29%) had lived outside Ireland for one year or more. Twenty-two lived in the United Kingdom, one in the United States of America, and one in Australia and Japan. Forty-four continued to live in Dublin. No definite information is available on the movements of 14 people during this ten-year period. All these 14 persons died prior to 1995.

As would be expected more of the cohort were married, separated and widowed with time. Seventeen more of the cohort had married, eight had separated, three widowed and 31 remained single between 1985 and 1995. Five members of the cohort were not available for interview, however the marital status of three of this five was known from clinical records and therefore the information is included. See table 7.12 below.

Table 7.12(a): Changes in Marital Status

Marital Status	1985 Number (%)	1995* Number (%)
Single	62 (75.6)	25 (30.5)
Married	12 (14.6)	24 (29.3)
Cohabiting	-	17 (20.7)
Separated	8 (9.8)	10 (12.2)
Widowed	-	5 (6.1)
Unknown	-	1(1.2)
Total	82 (100)	82 (100)

* marital status in 1995 or at the time of death, if earlier.

Table 7.12(b) The change in civil status over the decade.

	single	married	cohabiting*	separated	widowed	Don't know	Total (1985)
single	25	14	17	2	3	1	62
married	-	7	-	4	1	-	12
separated	-	n	-	4	1	-	8
Total (1995)	25	24	17	10	5	1	82

*In 1995 respondents were offered the choice to describe themselves as cohabiting, in addition to being single or married, reflecting the change in social norms over the decade since they were first interviewed.

By 1995 the total number of children, who have been born to these respondents, had risen, from 68, to 142. Forty-five (55%) of the cohort had children in 1985 and this number had risen to 57 (70%) of the cohort by 1995. In 1995 a greater percentage of the respondents were living with their children, that is 54 (38%) of the respondents in 1995 compared with 26 (28%) in 1985. There appears a greater willingness to accept the responsibilities of parenthood by 1995 compared with 1985. However of the one hundred and forty-two children born to this cohort, 93 have at least one parent who is HIV sero-positive. See table 7.13

Table 7.13: Respondents who have children:

Respondents with children	1985(Number (%))	1995(Number (%))
Nil children	35 (42.7)	14 (17)
Have children	47 (57.3)	68 (83)
Total	82 (100)	82 (100)
Total number of children born to respondents	68	142
Respondents living with their children	26 (28)	54 (38)

Table 7.13(b) shows the change in the number of children born to respondents over the decade

1995

1985	0	1	2	3	4	5	6	Don't know	total
0	14	7	6	2	0	1	0	5	35
1	0	5	9	1	1	1	0	1	18
2	0	0	3	6	1	3	0	5	18
3	0	0	0	3	1	1	0	0	5
4	0	0	0	0	2	0	1	2	5
5	0	0	0	0	0	0	1	0	1
total	14	12	18	12	5	6	2	13	82

- D K = don't know, that is there was no information on these 13 people who had died or were lost to follow up.

Table 7.14 shows the work experience of the cohort in 1985 and over the decade

Table 7.14(a): Work Experience in 1985 and 1995 (or as recorded on the death certificate).

Work Experience	1985 Number (%)	1995 Number (%)
Employment	10 (12.2)	17 (20.7) [*6]
Awaiting first job	6 (7.3)	
Unemployed	50 (61)	48 (58.6) [*19]
House duties	15 (18.3)	12 (14.6) [* 2]
Unable to work	1 (1.2)	
Missing data	0	5 (6.1%)
Total	82 (100%)	82 (100%)

[*] denotes that this number had died by 1995

There is a small increase in the number of the group in work in 1995, from 10 to 17. Further, 24 (29%) of the group have worked for some time between 1985 and 1995, and 49 (60%) have not worked at any time.

Table 7.15 shows the cohorts experience with the prison system by 1995 and since the first interview in 1985.

Table 7.15: Prison experience

Prison experience	Number (%)
Ever in prison (1995)	67 (82)
prison by 1985	63 (77)
Prison since 1985	37 (45)
Not in prison since 1985	28 (34)
Never in prison	15 (18)
Total	82.(100)

In 1985, sixty-three of the cohort had been to prison, by 1995 this had risen by four to sixty-seven (83.7%). Thirty-seven (45%) of the group are known to have been in prison since 1985, twenty-eight (34%) not been to prison since 1985. There is no information about seventeen (8.5%) of the cohort.

Table 7.16 compares drug use in 1985, 1995 and the decade intervening.

Table 7.16(a): Drug Use in 1985, 1995 and the intervening decade

Drug Use	1985 Number (%)	1995 Number (%)	1985-1994 Number (%)
Current drug use	42 (51)	*30 (37)	63 (77)
Abstinent	40 (49)	*22 (27)	16 (20)
No data	0	5 (6)	3 (3)
R.I.P.	0	25 (31)	
Total	82 (100)	82 (100)	82 (100)

* One person in each group died in 1995 prior to interview.

Table 7.16(a) describes the known drug use in the cohort from 1985 to 1995 and is derived from interviews at two points (50 people), from the researcher's own GP clinical records (68 people) and from drug treatment services records (75 people). Current drug use means that the individual was using heroin on a daily basis. Abstinent means the individual has not used any opiates for at least one month.

Table 7.16(b): Comparison of drug use in 1985 and the change by 1995

DRUG USE (1995)

<u>Drug use (1985)</u>	Yes	No	Don't know	Dead	Total
Yes	17	7	4	14	42
No	13	15	1	11	40
Total	30	22	5	25	82

Summary and conclusions: Of the 40 abstinent drug users in 1985 only 13 were abstinent between 1985 and 1994 and only 10 remained abstinent throughout the whole study period. On the other hand of the 42 current drug users in 1985 38 used during the decade between interviews but only 17 continued to use throughout the study period. There was a high level of episodic heroin use within the cohort over the decade of the study.

In 1995 30 (37%) of the cohort were regular drug users. One person died in 1995 prior to interview, but was in a drug treatment programme at the time of death. Of the 42 using drugs in 1985, 38 had used drugs between 1985 and 1994, and 17 were still using in 1995. Most of the episodic and current drug users since 1985 were active users in the year 1985. Twenty-four (57%) of the 42 using drugs in 1985 were alive in 1995. Sixteen (38%) of the 42 are known to have died, and about two others there is no definite information, although it is most likely they were alive in 1995, as they were known by drug counsellors to be alive in the previous year, before they left the country.

Of the 40 abstinent in 1985, 25 had used drugs between 1985 and 1994 and 13 were current users in 1995. 28 of the 40 who were abstinent in 1985 were alive in 1995, and 11 (27.5%) had died. Of those who were abstinent in 1985 a greater percentage (70 %) were alive in 1995 in comparison to those who were using drugs at the time of interview in 1985, that is (57%). However this is not statistically significant ($p=0.27$). Twenty-five of the 40 abstinent in 1985 restarted drug use between 1985 and 1994, further only 10 of this 40 were still abstinent in 1995, the other 5 had died. Therefore there is a high level of relapse into drug use over the decade. Twenty-nine of the 42 (69%) who were using drugs in 1985 were found to be HIV positive. Further 22 of the

40 (55%) who were abstinent in 1985 are also HIV positive. There is a higher prevalence of HIV in those using drugs in 1985 than in those who were abstinent at that time, however this is not statistically significant ($p=0$).

Twenty-one of the 42 who were using drugs in 1985 continued to use drugs over the decade and are alive. Sixteen of the 21 are HIV positive and 5 are HIV negative. Continuing drug use is associated with a high level of mortality and morbidity. Of those 10 who are still abstinent in 1995, 2 are HIV positive, 1 tested HIV negative, and 7 did not test or did not return for the test result so the level of HIV infection appears to be low in the group abstinent through the decade.

Study 1 (b): Mortality

The prime objective of this part of the study is to determine the mortality in the MQF cohort over a ten-year period. In addition the study reports:

- The cause of death, age at the time of death, and recorded place of death.
- The numbers of those who had died who had HIV infection,
- The length of time since first using opiates to the date of death.

Deaths:

Twenty-seven (32%) of the original cohort of eighty-two had died by 1995. The cause of death for each individual was transcribed from the official death record. Twenty-five of the deaths occurred within the city of Dublin, one in London and one in Birmingham. A legal colleague, attending the General Register Office in London, obtained the death records of the two individuals who died in England. To comply with the Minister's proviso, the name and surname of the individual, and the date and place of death are not be recorded in this document. Place of death is recorded as "home¹, 'hospital' or 'other'. Date of death has been substituted with 'year of death'.

Table 7.17 below gives details of individual death records rendered anonymous as directed. The last column details the HIV sero-status of the individual where it is known and has been added by the researcher to indicate the possible relationship between HIV status and the cause of death.

Table 7.17: Death Records and HIV status

Place/Year	Sex	Condition	Age	Occupation	Certified cause of death	HIV status
Home 1993	Male	Single	32	Painter & decorator	Pneumonia, HIV disease	<i>Positive</i>
Home 1993	Male	Single	33	Unemployed	Lung abscess, Pneumonia	<i>No record</i>
Other 1991	Male	Married	32	Unemployed	Severe respiratory depression, combination of opiates and benzodiazepines	<i>No record</i>
Home 1993	Male	Single	29	Labourer	Acute viral myocarditis, Disseminated mycobacterium disease	<i>Positive</i>
Hospital 1993	Male	Single	33	Unemployed	Acute encephalomyelitis, recurrent pneumonia	<i>Positive</i>
Hospital 1992	Male	Single	34	Unemployed	Cardio-respiratory depression, overdose of drugs – accidental	<i>Positive</i>
Hospital 1993	Male	Single	37	Unemployed	Cerebral anoxia, cardiac arrest Heroin overdosage	<i>Positive</i>
Hospital 1989	Male	Married	34	Labourer	Pneumonia Vacuolar myelopathy	<i>Positive</i>
Hospital 1991	Female	Widow	30	Housewife	Endocarditis, pneumonia, AIDS, HIV	<i>Positive</i>
Hospital 1993	Male	Single	28	Shoe-maker	Intracranial haemorrhage, epilepsy, thrombocytopenia	<i>Positive</i>
Hospital 1988	Female	Married	24	Home duties	Streptococcal pneumonia, quadriplegia 20 to vacuate myelopathy	<i>Positive</i>
Other 1992	Male	Widower	31	Unemployed	Haemothorax and haemopericardium, single stab wound in the aorta and heart, single stab wound in the chest	<i>Positive</i>
Hospital 1988	Male	Single	25	Unemployed	Bronchpneumonia, aspiration of vomitus	<i>Positive</i>

Table 7.17 continued

Place/Year	Sex	Condition	Age	Occupation	Certified cause of death	HIV status
Hospital 1993	Male	Single	32		Bronchopneumonia, immunosuppression	<i>Positive</i>
Hospital 1992	Male	Single	27	Unemployed	Severe head injuries, fell from height	<i>No record</i>
Hospital 1994	Male	Single	31		Encephalopathy	<i>Positive</i>
Hospital 1992	Male	Single	26	Unemployed	Shock and haemorrhage, multiple injuries, road traffic accident	<i>No record</i>
Hospital 1994	Male	Married	34		Status epilepticus, respiratory arrest- 2hrs. Spastic quadriplegia grand-mal epilepsy -13yrs. Prolonged hypoglycaemia — 3years. Diabetes mellitus 17yrs	<i>No record</i>
Other 1991	Male	Single	22	Unemployed	Drug overdose	<i>Positive</i>
Home 1991	Male	Single	27	Unemployed	AIDS -4 years HIV infection, (known since 1983)	<i>Positive</i>
Hospital 1994	Male	Married	34	Labourer	Acute respiratory distress syndrome, Pneumonia cirrhosis	<i>Positive</i>
Hospital 1995	Male	Married	32	Unemployed	Encephalopathy - 6 months, lower respiratory tract infection	<i>Positive</i>
Hospital 1995	Male	Single	33	Security	Pneumonia cerebral lymphoma, Chronic acquired immuno suppression	<i>Positive</i>
Home 1993	Male	Single	38	Unemployed	Probable overdose of drugs	<i>No record</i>
Hospital 1994	Male	Single	33		Respiratory arrest 20 to opiate administration	<i>Positive</i>
Hospital 1992	Male	Single	39	Unemployed	Cirrhosis of liver	<i>Positive</i>
Hospital 1994	Male	Married	33	Unemployed	Respiratory failure, due to acute tracheo bronchitis and acute alcohol intoxication. Accident.	<i>Negative</i>

Of the 27 who died two (7.4%) were female. The majority (n=18, 66.7%) were single, seven (25.9%) were married and two (7.4%) were widowed. One of the women was married and one was widowed at the time of death.

Rank, profession or occupation

Eight (29.6%) were described on the death certificate as having an occupation (see table 7.17 for details). The remaining 19 (70.4%) were described as unemployed or this column was left blank. The convention in recording deaths on the official certificate is that the column “rank, profession or occupation” is left blank if the informant does not nominate an occupation. However, in practice the term “unemployed” is often entered where the deceased has had no obvious occupation.

Certified cause of death:

The frequency of conditions entered on the death certificates is as follows: Pneumonia / bronchitis n=11 cases, respiratory depression or drug overdose n=6 cases, AIDS, HIV infection n=3 cases, immuno-suppression n=2, encephalopathy n=3 vacuolar myelopathy n=2, cirrhosis n=2 cases, and epilepsy n=3 cases. There is one case of each recorded for cerebral lymphoma, mycobacterium disease, diabetes and thrombocytopenia. As can be seen from table 7.17 there is, more often than not, multiple pathology recorded. These certified causes of death do not describe the relationships of these deaths to HIV disease, it is only when the registered cause of death is read in conjunction with the known HIV sero-positivity of the individual that the link to HIV disease can be recognised. See table 7.18

When reference is made to the HIV sero-status of the individual the cause of death can be summarised into four main groups, as a consequence of:

- HIV disease (n=14).
- Opiate overdose (n=7)
- Accident or violence (n=3)
- Medical other than HIV related (n=3)

Table 7.18: Frequency of recorded medical condition and known HIV sero-status

Medical condition	HIV positive	HIV negative	No record	Total
Pneumonia / bronchitis	9	1	1	11
Overdose of drugs	5	0	1	6
HIV / AIDS	3	0	0	3
Encephalopathy	3	0	0	3
Immunosuppression	2	0	0	2
Injury / violent death	1	0	2	3
Myo/endocarditis	2	0	0	2
Vacuolar myelopathy	2	0	0	2
Epilepsy	1		1	2
Cirrhosis	2			2
Lymphoma	1	0	0	1
Mycobacterium disease	1	0	0	1
Diabetes	0	0	1	1

Fourteen (51.9%) of the 27, that is twelve males and two females, died as a result of HIV disease. Seven (25.9%), all male, died as a consequence of opiate overdose, and three (11.1%), all male, died violent deaths. These three deaths were the result of a road traffic accident, falling from a height and a fatal stabbing. The remaining three, all males, died from medical causes which were non-HIV related.

Place of death:

Twenty (74.1%) of those who died did so in a hospital, however two of these were serving prisoners in Mountjoy gaol at the time of their death and had been taken to hospital when found to be in a collapsed state in their prison cell. An additional four (14.8%) died at home. The remaining three (11.1%) died elsewhere and were recorded as “brought in dead” to the hospital, one of these three was a serving prisoner in Mountjoy prison at the time of his death.

See table 7.19

Table 7.19: Place of death

Place of death	Number (%)
Hospital	20 (74.1) * <i>Note two were prisoners at the time of death</i>
At home	4 (14.8)
Elsewhere	3 (11.1) * <i>Note one was a prisoner- at the time of death</i>
Total	27 (100)

The ages of the individual at the time of death is given, in three groups, in table 7.20

Table 7.20: Age at last birthday:

Age range	Number (%)
Less than 30 years	9(33.3)
30 -3 5 years	15(55.6)
More than 35 years	3(11.1).
Total	27 (100)

Nine of this cohort died before their thirtieth birthday and 24 (88.9%) before their thirty-fifth birthday.

The mean age of death is 32.2 years (standard deviation is 4.1 years, median age is 32 years and the mode 33 years.)

Table 7.21: Year of Death

Year	Number (%)
1988	2 (7.4)
1989	1 (3.7)
1990	0
1991	4(14.8)
1992	5(18.5)
1993	8 (29.6)
1994	5(18.5)
1995	2 (7.4)
Total	27 (100)

The first deaths in this cohort occurred in 1988 - one male and one female, both had advanced HIV disease, and were patients of the researcher's own practice.

One male died in 1989 as a result of HIV disease. Three males and one female died in 1991, two males from drug overdoses, and the other two from HIV disease.

In 1992 five males died, 2 were HIV positive, 1 was HIV negative and the other 2 there is no record. Of these 5 males 3 died violently, 1 through an overdose and one from cirrhosis of the liver. This last man gave up heroin in 1983 but became cross-addicted to alcohol. 1993 was the year with the highest number of deaths; there were 8 males, 6 of who was HIV positive and 2 for whom there is no record. The cause of death was HIV related in the 6 who were HIV positive, a medical cause (Lung abscess and pneumonia) in one and the remaining individual died of a respiratory arrest secondary to a drug overdose.

HIV sero-status

The HIV status of only three individuals is recorded on the death certificates, however from other clinical notes it is known that:

- 21 of the 27 (77.8%) of the group were HIV sero-positive
- 1 of the 27 (3.7%) of the group was HIV sero-negative
- 5 of the 27 (18.5%) of the group the HIV sero-status is unknown

Table 7.22 shows the relationship between the HIV status and the cause of death using the four categories described.

Table 7.22: HIV status and cause of death

HIV status	HIV related deaths	Overdose deaths	Violent deaths	Medical deaths (non HIV)	Total
positive	14	6	1	0	21
negative	0	0	0	1	1
unknown	0	1	2	2	5
Total	14	7	3	3	27

There are 14 HIV related deaths to 13 non-related deaths and 21 deaths in people known to be HIV positive and six deaths in which HIV sero-status is unknown (n=5) or negative (n=1). HIV infection is a significant cause of death in this cohort ($\chi^2=3.98$, $p=0.046$)

The length of time since first using opiates to the date of death.

The survival time for this group, from first heroin use to their death, ranges from between 10 and 23 years.

This is shown in table 7.23 below.

Table 7.23: The interval in years from 1st heroin use to death

Interval between 1st heroin use and death	Number who died
10 years	2
11 years	3
12 years	6
13 years	6
14 years	3
15 years	3
18-24 years	4
Total	27

The mean survival time is 13.8 years.

Study 1 (c): HIV and other virus infections

The objectives of this study are to determine

- the extent of HIV and other virus infections in this cohort
- medical problems encountered by the cohort, other than virus infections.

Clinical record support:

Thirty-eight of the original cohort of 82 persons were registered patients of the author's practice prior to the first interview in 1985. Following this interview a further 26 of this cohort registered with this practice in the course of the next few years. The practice therefore holds a medical record for each of 68 (83%) of the original cohort. The drug treatment services (Trinity Court) hold clinical records on 78 (95%) of the 82 members of the cohort.

These two sets of clinical records provide corroborative evidence for the key clinical events recorded in the interviews. In total, supportive evidence was available for 80 of the 82 persons from these two clinical records. The two individuals for whom there are no records were not interviewed in 1995, as they were lost to follow-up.

Table 7.24 sets out the results of the three different virus antibody tests, the chief clinical support for these test results and the self-reported history of hepatitis given in 1985. The last column shows whether the individual was alive or dead by 1995.

Table7.24: EVIDENCE OF VIRAL INFECTIONS (HBV, HCV and HIV)

Id number	(1985) Hx of hepatitis	HBV test	HCV test	HIV test	Clinical Support	Alive /dead (1995)
1	Yes	Neg	Mo test	Neg *	GP	Dead
2	Yes	Pos	Pos	Pos	GP	Dead
1	No	No test	No test	No test	GP	Alive
4	Yes	Pos	Pos	Pos	GP	Alive
5	Yes	Pos	No test	Neg	GP	Alive
6	Yes	Pos	No test	No test	GP	Alive
7	Yes	Pos	No test	No test	GP	Dead
8	Yes	Pos	No test	Pos	GP	Dead
9	No	Neg	No test	No test	GP	Dead
10	Yes	Pos	Pos	Pos	GP	Dead
11	No	Neg	No test	Pos*	GP	Alive
12	No	Pos	Pos	Pos	GP	Dead
13 (F)	Yes	Pos	No test	Neg	GP	Alive
14	Yes	Pos	Neg	Pos	GP	Alive #
15	Yes	Pos	Pos	Pos	GP	Alive
16 (F)	No	Pos	No test	Neg	GP	
17 (F)	Yes	Pos	Pos	Pos	GP	Alive
18	Yes	Pos	No test	Pos	GP	Dead
19	Yes	Pos	No test	Pos	GP	Dead
20	No	Pos	No test	Pos	GP	Alive
21	Yes	Pos	Pos	Pos	GP	Alive
22	Yes	Pos	Pos	Pos*	GP	Alive
23 .(F)	Yes	Pos	No test	Pos	GP	Dead
24 (F)	No	Pos	Pos	Pos	GP	Alive
25	No	Pos	Pos	Pos	GP	Dead
26	No	No test	No test	No result	GP	Alive
27 (F)	Yes	Pos	No test	Pos	Trinity Court	Dead
28	No	Pos	No test	Pos	Trinity Court	Dead
29 (F)	Yes	Pos	Pos	Pos	GP	Alive
30	No	Neg	No test	Pos	Hospice	Alive#
31	Yes	Pos	No test	Pos	GP	Alive
32	Yes	Pos	Pos	Pos	GP	Alive
33	No	Pos	No test	Pos	GP	Alive
34	No	Pos	No test	Pos	GP	Alive
35	Yes	Pos	No test	Pos	GP	Dead
36	No	Neg	Pos	Pos	GP	Dead
37	Yes	Pos	Pos	Pos	GP	Alive
38	Yes	Pos	No test	Pos	GP	Alive #
39	No	Neg	No result	Negative	GP	Alive
40	No	No result	Pos	Positive	GP	Alive #
41	Yes	Neg	No test	Negative	GP	Dead

* denotes an HIV test taken in another country (F) denotes a female
denotes some one who has died since 1995

Table7.24 continued

Identity Number	(1985) Hx of Hepatitis	HBV test	HCV test	HIV test	Clinical Support	Alive /dead (1995)
42	No	Pos	Pos	Pos	GP	Dead
43	Yes	Pos	No test	Pos	GP	Dead
44 (F)	Yes	Pos	Mo test	Neg	GP	Alive
45	No	Neg	Mo test	No test	GP	Dead
46 (F)	Yes	Pos	No test	Pos*	GP	Alive
47	Yes	Pos	No test	No result	GP	Alive
48	Yes	Pos	No test	Neg*	GP	Alive
49	Yes	Pos	No test	Pos	GP	Alive
50	No	No test	No test	Neg	GP	Alive
51	Yes	Pos	No test	Pos	GP	Dead
52 (F)	No	Neg	No test	Pos	GP	Alive
53	Yes	Pos	No test	Neg	Trinity Court	Alive
54	Yes	Pos	Pos	Pos	GP	Alive
55 (F)	No	Neg	No test	Neg	GP	Alive
56	Yes	Pos	No test	No test	Nil	Alive
57	Yes	Pos	No test	Pos	Trinity Court	Dead
58	No	No test	No test	No test	Trinity Court	
59	Yes	No test	No test	No test	GP	Alive
60	Yes	Pos	No test	Pos	Trinity Court	
61	No	Neg	No test	Neg	GP	Alive
62	Yes	Pos	Positive	Pos	GP	Dead
63	No	Neg	Pos	Pos	GP	Alive
64	No	No test	No test	No test	GP	Alive
65 (F)	Yes	Pos	Pos	Pos	Trinity Court	Alive
66	No	Neg	Pos	Pos	Trinity Court	Dead
67	No	Neg	No test	Pos	Trinity Court	Dead
68 (F)	No	Pos	Pos	Neg	GP	Alive
69	No	Neg	No test	Neg	Trinity Court	Dead
70	Yes	Pos	No test	Neg	Nil	Alive
71	Yes	Pos	No test	Pos	GP	Dead
72	Yes	Neg	Pos	Pos	GP	Dead
73 (F)	Yes	Pos	Pos	Pos	Drug clinic	Alive
174	Yes	Pos	No test	Pos*	Drug clinic	Alive
75 (F)	No	Neg	No test	No test	GP	
76	Yes	Pos	No test	No test	GP	Alive
77 (F)	Yes	Neg	No test	No test	GP	Alive
78 (F)	Yes	Pos	No test	Neg	Trinity Court	
79	Yes	Pos	Pos	Pos	GP	Alive
80 (F)	Yes	Pos	Pos	Pos	Drug clinic	Alive
81	Yes	Pos	Pos	Pos	Drug clinic	Alive
82 (F)	No	Pos	No test	Neg	GP	Alive

Hepatitis B virus (HBV) infection

Fifty-one of the cohort of 82 gave a history of hepatitis, or jaundice at interview in 1985, 17 of these had died by 1995. Fifty-seven (70%) gave a history and have clinical evidence of HBV infection, by 1995, of whom 18 are dead by that year ($p=0.37$).

Table 7.25: Results of HBV screening and source of clinical support material.

HBV	GP	Drug services	Self-reported	Other	Total
positive	44	11	2	0	57 (18 dead)
negative	14	3	0	1	18 (9 dead)
no test or no report	6	1	0	0	1 (nil dead)
Total	64	15	2	1	82 (27 dead)

Hepatitis C virus (HCV) infection

Twenty-seven of the 82 have a history and clinical evidence of Hepatitis C (HCV) infection, of whom 9 are dead. However 54 (66%) had not tested or do not have a record of a test result. It should be noted that testing for Hepatitis C antibodies has become more widely available since 1995 and further that 27 of the 28 tested for antibodies to the Hepatitis C virus are sero-positive. Twenty-two (26.9%) are HCV positive of whom nine are dead ($p=0.53$).

Table 7.26: Results of HCV screening and source of clinical support material.

HCV	GP	Drug services	Self-reported	Other	Total
positive	22	5	0	0	27 (9 dead)
negative	1	0	0	0	1 (nil dead)
no test or no result	41	10	2	1	54 (18 dead)
Total	64	15	2	1	82 (27 dead)

Human Immuno-deficiency Virus (HIV) infection

Fifty-one of the original cohort of 82 (62%) have a history or laboratory evidence of HIV infection, as already stated 21 of whom are dead. Seventeen (21%) had tested negative for HIV antibodies, and 14 (17%) have no record of testing, or have not sought the test result.

Table 7.27: Results of HIV screening and source of clinical support material.

HIV	GP	Drug services	Self-reported	Other	Total
positive	39	11	0	1	51 (21 dead)
negative	13	3	1	0	17 (3 dead)
no test or no result	11	1	1	1	14 (3 dead)
Total	63	15	2	2	82 (27 dead)

Twenty-six of the 27 persons found to be Hepatitis C positive were also HIV positive. Forty-two of the 57 persons found to be Hepatitis B positive were also HIV positive.

Table 7.28: Virus sero-status and gender

Gender	HIV positive(%)	HCV positive(%)	HBV positive(%)
Male (n=62)	40 (64.5)	20 (32.3)	45 (72.6)
Female (n=20)	11(55)	7(35)	12 (60)
Total (n=82)	51 (62)	27 (34)	57 (70)

The level of these various infections in both male and female are similar, and are independent of gender.

Comparison of the rates of HIV sero-positivity for the same study cohort reported at different laboratories or treatment centres.

HIV testing was introduced into Ireland in October 1985 and was undertaken by the Virus Reference Laboratory (VRL) as a national service. All treatment centres and agencies forwarded blood samples to the VRL for HIV antibody testing. As the demand for, and the volume of, HIV testing increased a number of hospital

laboratories began to perform their own testing. However in order to retain a central register of positive findings sera that tested positive is forwarded from these laboratories for re-testing and confirmatory tests. The first test performed is the ELISA'S test and if positive a further confirmatory test, the LINE ASSAY test is undertaken. A positive test is only given if both tests are reported as positive. This ensures a high specificity.

In October 1994 the names and dates of birth of the study cohort (n=82) were forwarded to the VRL to check for HIV sero-positivity. As individual results are confidential to the patient or referring doctor the VRL would only release total figures for anyone year. See table 7.29 below.

Table 7.29: MQF study cohort - results of HIV testing by year at the VRL

Year	Number positive
1985	6
1986	7
1987	4
1988	2
1989	3
1990	2
1991	1
1992	1
1993	2
1994	1
Total	29

The total numbers, who were found to be HIV positive according to the VRL data, are 29 persons.

The same information, that is names and dates of birth, about the study cohort (n=82) was forwarded to the HIV medical service in St James's Hospital and a total of 39 individuals were found to be HIV sero-positive.

On reviewing the medical records of the MQF study cohort held in Trinity Court (n-78), it is found that 41 of the cohort are recorded as being HIV sero-positive.

As shown earlier at interview and from the researchers practice records the researcher determined that 51 of the study cohort of 82 persons are HIV positive. See table 7.30

Table 7.30 Numbers of the study cohort recorded to be HIV positive at the different agencies.

Agency	Virus Reference Laboratory	HIV clinic St James Hospital	Trinity Court	MQF cohort 1995 (Study 1)
Numbers HIV positive	29	39	41	51

There is a marked difference in the numbers identified as being sero-positive at the different agencies, ranging from 29 to 51 persons. The researcher was not allowed access to the VRL or the HIV clinic data for reasons of confidentiality but was allowed access to the Trinity Court records under the clear undertaking to respect any one individuals confidentiality, as detailed previously. There are ten persons identified as HIV positive in 1995 (see table 7.30) but not known to be positive (n=8) in the records of Trinity Court, or not to have a record (n=2) in Trinity Court. These ten individuals' questionnaires were examined to determine where they underwent the HIV antibody test. Five of these individuals tested outside of Ireland and the other five tested with their own general practitioner or with the prison authorities. Of the five tested outside of Ireland two had died by 1995, of HIV related causes and three now attend specialist HIV services in Britain. The remaining five tested in the early years after 1985 with their GP's or whilst in prison. Three of these five were dead by 1995 and the other two are having shared care, between their GPs and specialist hospital clinics for HIV related problems. Therefore the figure of 51 HIV positive individuals out of the original cohort of 82 is the more reliable figure.

Other Medical Problems:

Hospitalisation

Forty-nine (98%) of the fifty surviving members of the cohort, who were interviewed, have been in-patients in hospital. Twenty-four (48%) of them in the last twelve months, 12 of these 24 had two or more admissions in that year.

Medical Treatment

Thirty-seven (74%) of the surviving cohort were receiving some form of medical treatment at the time of the interview, 28 (56%) were on a drug treatment programme.

- In treatment (generically) n - 37 (74%)
- Drug treatment programme n = 28 (56%)
- Medical treatment, for one or more medical conditions n = 30 (60%)
- Psychiatric treatment n=7(14%)
- Treatment for HIV disease n - 25 (50%)

Medical problems:

HIV disease, 29 (58%) of the fifty interviewed are known to be HIV positive and 25 of this number are getting treatment for HIV disease. Five are not in any treatment programme. Other medical problems include asthma/bronchitis (n=7), peptic ulcer disease (n=3), gynaecological problems (n=3), deep vein thrombosis (n=2), epilepsy (n=1), cirrhosis (n=1), alcoholism (n=1), valvular heart disease (n=1) and pulmonary tuberculosis (n=1).

Opiate detoxification programme:

Twenty-nine (58%) of the group have been on one or more detoxification programmes in the last ten years. Eight of the 21 who have not had a detoxification programme were on a methadone programme or using “street heroin” at the time of interview.

Conclusions

Fifty-seven (70%) of the original cohort is Hepatitis B positive, 51 (62%) are HIV positive and 27 (33%) are Hepatitis C positive. (This last percentage figure will probably be much greater when more of the cohort undergo HCV testing.) There are high levels of blood borne virus infections in this cohort, which are related to their method of drug use.

Study 1 (d): Behavioural changes in the cohort over a ten-year period

The objectives of this study are to determine:

- the extent of any current risk behaviours such as drug use, injection equipment sharing and unprotected sexual practices.
- to determine any modifications that have been made in the ten-year period since the advent of HIV testing.

Fifty of the fifty-five surviving members of the original cohort were re-interviewed in 1995. The answers to those questions related to risk behaviour changes are collected in the following tables. The fifty people interviewed are made up of 35 (70%) males and 15 (30%) females.

Table 7.31 shows the use of drugs in prison since 1985

Table 7.31: Use of drugs in prison since 1985.

Prison	Yes Number %)	No Number (%)	Total
Ever in prison	42 (84) (33 m, 9 f)	8 (16) (2m, 6 f)	50 (100) (35m, 15 f)
In prison since 1985	29 (58) (23 m, 6 f)	21 (32) (12m, 9 f)	50 (35m, 15 f)
Drug use in prison (since 1985)	22 (34) (18m, 4 f)	28 (56) (17m, 11 f)	50 (35m, 15 f)
Injection equipment sharing In prison(since 1985)	14 (28) (10m, 4 f)	36 (72) (25m, 11 f)	50 (35m, 15 f)

Twenty-nine (58%) of the surviving cohort had been in prison since 1985 and 22 of them had used drugs whilst there. Fourteen of them admitted to sharing injection equipment during this time. This shows a high degree of risk behaviour, that is injecting and equipment sharing, amongst those of the cohort who had been in prison.

Table 7. 32: Use of Drugs since 1985

Drug use behaviour	Yes Number (%)	No Number (%)	Total
Currently using any opiates (1995) including methadone)	29 (58) (19m, 10 f)	21 (42)* (16m, 5 f)	50 (100%) (35m, 15 f)
Currently on a methadone programme	24 (48) (14m, 10 f)	26 (52) (21 m, 5 f)	50 (35m, 15 f)
Currently using street drugs (heroin)	13 (26) (10m, 3 f)	37 (74) (25 m, 12 f)	50 (35m, 15 f)
Injection equipment sharing	8 (16) (5 m, 3 f)	42 (84) (30m, 12 f)	50 (35m, 15 f)
Injection equipment sharing in the last 5 years	18 (36) (10m, 8 f)	32 (64) (25 m, 7 f)	50 (35m, 15 f)
Use a needle exchange	22 (44) (15m, 7 f)	26 (52) (18m, 8 f)	50 (35m, 15 f)
Family history of drug use (that is sibling drug use)	32 (64) (21m, 11 f)	18(36) (14m, 4f)	50 (35m, 15 f)
Drug use in pregnancy	10 (66.7)	5 (33.3)	15 f

**Abstinent from drug use (see 'No' column above) means abstinent from drug use for at least one months duration.*

Twenty-nine (58%) of the group continue to use opiates in 1995 and of these 24 were on a methadone programme. However eight of this group of 24 persons admitted to using 'street drugs' whilst on a methadone programme, that is one in three persons on a methadone programme felt the need to use heroin or other opiates on top of those prescribed for them. In total 13 (26%) were using street drugs, that is heroin.

Only eight (16%) persons admit to sharing needles in 1995, but 18 (36%) have shared needles in the previous five years. The dangers of infection, through sharing injecting equipment, were well known to the majority of drug users by 1990.

Twenty-two of the 29 who have been in prison since 1985 have used heroin whilst in prison and 14 of these 22 shared needles whilst in prison.

Thirty-two (64%) gave a history of a sibling with a drug use problem.

Table 7.33: Sexual Practices

Sexual practices	Yes Number(%)	No Number (%)	Total
Currently in a sexual relationship	30 (60) (22 m, 8 f)	20 (40) (13m, 7 f)	50(100) (35m, 15 f)
Use any form of contraception	26 (52) (17m, 9 f)	24 (48) (18m, 6 f)	50 (35m, 15 f)
Use condoms	22 (44) (16m, 6 f)	28 (56%) (19m, 9 f)	50 (35m, 15 f)
Change in sexual habits since HIV	24 (48) (15m, 9 f)	26 (52) (20 m, 6 f)	50 (35m, 15 f)

Twenty (40%) were not in a sexual relationship at the time of interview. However all but two of the cohort had one or more sexual relationships in the last ten years.

Table 7.34: Sexual partners (1986-1995)

Number of partners Between 1986 and 1995	Number (%) Gender
None	2(4) (1m, 1 f)
One	23 (46) (13m, 10 f)
Two	10(20) (7m, 3 f)
Three	2 (4) (1 m, 1 f)
Four, or more	13(26) (13m, 0 f)

The males had more sexual partners than the females in the decade 1986-1995, eleven (73.3%) females have remained monogamous or have had no partner, only four (26.6%) females have had more than one partner in the decade.

One male claimed to have had 60 and another that he had over 100 partners in the decade.

Condom use

Twenty-two (44%) in total say that they use condoms, but when asked if they 'always' use them only 11 replied affirmatively, the other 11 use them 'sometimes'.

However three of the 28 who replied that they did not use condoms also claimed to use them 'sometimes'. When asked why they only 'sometimes or never' use condoms eight replied that they 'did not like using them', all male, five replied that there was 'no risk to them' and a further four replied that their 'partner did not like them', all female.

Gender issues

Women were more likely to use some form of contraception, that is nine (60%) of the women used some form of contraception compared with 17 (48%) of the men, although this is not statistically significant ($\chi^2 = 2.16, p=0.14$).

Only six (40%) of women used condoms, however when asked why they do not use them four of the remaining nine said their male partner did not like to use them.

Only 16 (46%) of the men say they use condoms, at any time.

In the decade since 1985 the women were more likely than the men to have changed sexual practices to less risky ones. Nine (60%) of women have changed sexual habits and 15 (43%) of men have changed sexual habits.

Of the 24 who have changed sexual habits seven have had fewer partners (3 males, 4 females). Two have become abstinent (1 male, 1 female), and 15 now use condoms (11 males 4 females).

Other Risk Factors

Ten (67%) of the women admitted to using heroin during pregnancy.

Hepatitis B: Thirty-six (72%) of the cohort of 50 persons is Hepatitis B positive, and 12 (24%) is Hepatitis B negative.

Hepatitis C: Nineteen (38%) of the cohort is Hepatitis C positive and one (2%) is Hepatitis C negative. Thirty (60%) did not test or no result is available.

Of note 17 of those 19 persons who are Hepatitis C positive are also HIV positive.

HIV: Twenty-nine (58%) of the group are HIV sero-positive, 12 (24%) are HIV sero-negative and nine (18%) did not test or did not want their test result. Seventeen of the 29 who are HIV positive have used heroin in prison since 1986, this is statistically significant ($p = 0.0081$). Further 11 of those 17 have shared needles in prison in the decade since 1986.

Twenty-four (83%) of those known to be HIV positive are also Hepatitis B positive and this again is statistically significant ($p = 0.016$).

Again 24 (83%) of those known to be HIV positive were using opiates at the time of interview (p value < 0.001), and 20 (69%) of these are on a methadone programme. Ten HIV positive persons were using street heroin and of these 10 using street heroin 6 are also on a methadone programme.

Fifteen (51.7%) HIV positive persons were in a sexual relationship at the time of interview, this is statistically significant ($p = 0.02$).

Conclusions

Whilst there is some evidence that this cohort is limiting risk behaviours there is still a high level of such behaviours.

The women are more likely to use some form of contraceptive measure, but use fewer condoms than the males. This is due to their male partner's apparent unwillingness to use condoms. Women are also more likely to have changed sexual practices than the males.