

#### TITHE AN OIREACHTAIS

### AN COMHCHOISTE UM GHNÓTHAÍ EALAÍON, SPÓIRT, TURASÓIREACHTA, POBAIL, TUAITHE AGUS GAELTACHTA

An Seachtú Tuarascáil

Cóireáil Andúil an Chóicín, Go hÁirithe Maidir leis an Taithí in Éirinn

HOUSES OF THE OIREACHTAS

Joint Committee on Arts, Sport, Tourism, Community, Rural and Gaeltacht Affairs

**Seventh Report** 

The Treatment of Cocaine Addiction, With Particular Reference to the Irish Experience

> Iúil 2005 July 2005

### **CONTENTS**

Introduction	
Conclusions and Recommendations of the Joint Committee	7 - 8
Appendix 1:	
Report of Consultants, Dr. Siobhán Barry and Ms. Elizabeth Lawlor	9 - 60
Appendix 2:	
Some facts about the cost of cocaine abuse in Ireland.  Appendix 3:	
Membership of the Joint Committee	
Appendix 4:	
Orders of Reference of the Joint Committee	

# Joint Committee on Arts, Sport, Tourism, Community, Rural and Gaeltacht Affairs

# Report on "The Treatment of Cocaine Addiction with Particular Reference to the Irish Experience".

#### Introduction

"When there's nothing romantic about doing a line"

When taking evidence on drug abuse it was put to the Joint Committee that the conventional wisdom was that little, if anything, could be done for cocaine addiction. The Joint Committee decided to have another look at the problem and the result is this Report which shows that a combination of medical, psychological and social interventions can have a definite and lasting impact on this destructive behaviour. The fact that vaccination research is ongoing in the US gives even greater hope for the future.

The Joint Committee is indebted to the consultants Siobhán Barry and Elizabeth Lawlor for showing the way forward.

Cecilia Keaveney T.D. Chairman July 2005.

## CONCLUSIONS AND RECOMMENDATIONS OF JOINT COMMITTEE

First of all the Joint Committee wishes to place on record its appreciation of the outstanding work carried out by the researchers, Dr. Siobhan Barry, Clinical Director/Consultant Psychiatrist and Ms. Elizabeth Lawlor, Senior Clinical Psychologist and to acknowledge their helpfulness and co-operation in the process which led to the final document.

The Joint Committee was compelled to commission this report given the striking increase in the abuse of cocaine in this and in other jurisdictions. Hardly a week goes by without significant seizures of the drug and the media reporting of court cases where the supply of huge amounts of cocaine is involved and therein lays a whole world of human misery and despair. The controlling effect cocaine has on an addict's life can lead to the exclusion of all other facets of life. When reporting on cocaine addiction the Joint Committee were very conscious of the fact that cocaine addiction does not usually occur in isolation. Other drugs such as cannabis and heroin and indeed the abuse of the legal "drugs" alcohol and tobacco, which are very high earners for the exchequer, are often also involved. The Joint Committee were also keenly aware of the fine delineation between the abuse of illegal and legal substances — one often leading to the other. The Joint Committee therefore makes the following recommendations, which are broadly in line with those of the consultants:

- 1. The importance of education and prevention should be underpinned by extensive media information campaigns directed at young people highlighting the downside of drug abuse. The Joint Committee observed an example of such a campaign in Japan where not only were young people targeted but their teachers were provided with extensive user-friendly manuals to guide them in getting the message across to their students, across the age spectrum/profile.
- 2. The Joint Committee are very conscious of the fact that drug education should start as early as possible in the education system and strongly recommend that topics such as life skills, feelings and emotions should be introduced to the primary section —" mol an óige agus tiocfaidh sí". For young people in general information campaigns should utilise the outlets which they most frequently adopt the Internet, mobile phones, cinema and television.

There is a justified national concern at suicide levels among young people and it is a known medical fact that substance abuse, such as cocaine, is a significant factor in this mortality rate. Suicide is the cause of death in up to 10% of cocaine related deaths. Therefore targeting the abuse will have a positive impact on the suicide rates.

- 3. The Joint Committee fully supports the expert opinion of the consultants in terms of treatment. Thus funding must be provided on a national basis for basic medical assessments, substance abuse assessments, psychological and psychiatric assessments, the provision of inpatient care and additional daycare facilities.
- 4. The Joint Committee are convinced of the role of Cognitive Behavioural Therapy as detailed by the consultants and strongly recommend the expansion of psychological support services as a feature of a holistic treatment programme.
- 5. The Joint Committee notes with interest that some existing medications have a role to play in treatment (see Appendix 1) and that the development of a vaccine is being pursued in the US. Success in this field would have huge implications for the treatment of cocaine addiction but also probably for other addictive behaviour.
- 6. The consultants point out that the comprehensive management of problem cocaine use incorporates paying attention to the medical, psychological, social and family difficulties that occur and the Joint Committee recommends that a treatment package be offered to users utilising the various strands outlined in the report.

Having reached these conclusions the Members of the Joint Committee are very conscious of the resource implications involved and that they spend much of their time chasing limited resources for their constituents, not always successfully. But this is a very unique situation: the treatment of cocaine addiction comes under the umbrella of the mental health services – the most consistently underfunded area of health expenditure where the percentage expenditure of the total has fallen in recent years. The Joint Committee will be taking this report and its conclusions to the attention of the Minister responsible for the National Drugs Strategy, Mr. Noel Ahern T.D. and he will be invited to appear before the Joint Committee with a view to the speedy implementation of the recommendations.

### **Appendix 1**

Report of Consultants, Dr. Siobhán Barry and Ms. Elizabeth Lawlor

On

The Treatment of Cocaine Addiction - with particular reference to the Irish Experience

# The Treatment of Cocaine Addiction - with particular reference to the Irish Experience.

Final report prepared for the Joint Oireachtas Committee on Arts, Sport, Tourism, Community, Rural & Gaeltacht Affairs.

Dr Siobhán Barry, Clinical Director/Consultant Psychiatrist & Ms Elizabeth Lawlor, Senior Clinical Psychologist

**Cluain Mhuire Service** 

Newtownpark Ave.,

Blackrock

Co Dublin.

1. In	troduction	15
2. Cocaine Use in Ireland		15
3. Consequences of Cocaine Use		16
4. Treatment Options		17
5. Irish Experience of Managing Cocaine Addiction		19
6. Conclusions & Recommendations		21
Appe	endices	
A.	What is cocaine?	23
B.	Legislation and Law Enforcement	25
C.	Irish Patterns of Cocaine Use	26
D.	Pathology Associated with Cocaine Use	29
E.	Co-dependency with opiates/alcohol	33
F.	Treatment Options	34
G.	<b>Acute Intensive Medical Intervention</b>	35
Н.	Residential Treatment Options	37
I.	Relapse Prevention	40
J.	Motivational Interviewing	41
K.	Contingency Management	43
L.	Cognitive Behavioural Therapy	44
M.	Complementary Therapies	49
N.	Questionnaire to Service Providers	51
References		55

#### 1. Introduction

Cocaine is a potent drug derived from the leaves of the coca shrub, which grows in mountainous regions of Peru, Bolivia and Colombia. Traditionally, the leaves of the coca shrub have been chewed by native South American people to help them combat tiredness and hunger, and thus enabling they work more effectively at high altitudes. Cocaine was first isolated from the coca plant in the mid 1800s and its use had become widespread in the USA and Europe by the 1880s, being taken for a wide variety of physical and mental ailments. (See *Appendix A*: What is cocaine?)

More than a century ago, complications emerged as a consequence of cocaine overuses which lead to its availability being regulated by law, the first piece of international legislation being passed prior to the First World War. Cocaine use in Ireland is currently regulated by the *Misuse of Drugs Act* (1977& 1984 (Amendments)). Garda and criminal justice data indicate that cocaine-related offences under the *Misuse of Drugs Act* have steadily increased from 42 seizures in 1995 to 566 in 2003 (An Garda Síochána, 2004) comprising 9% of all drug offences during 2003. Cocaine and crack addicts not alone compromise their physical health as a consequence of their addiction, but profound moodiness and anti-social behaviour also occur, with problem cocaine users often resorting to theft in order to fund their habit. (See *Appendix B*: Legislation and Law Enforcement)

#### 2. Cocaine Use in Ireland

Cocaine trends are difficult to monitor at a national level but existing data suggests that cocaine use among young people has risen. A number of surveys of drug use have been carried out in Ireland since 1998, each showing that cocaine use is predominantly behaviour of early adult life and that male use is approximately twice that of females. Data from the National Drug Treatment Reporting System (NDTRS) has shown that cocaine is mainly reported as a second, third or fourth problem drug and the numbers in treatment have increased substantially in recent years. Those in treatment who reported cocaine to be their primary problem drug increased from 25 in 1996 to 155 in 2002, comprising about 2 % of all of those in contact with treatment services. The regional spread of cocaine users in both treatment data and Garda Síochána data indicates that the use of cocaine is not just a Dublin phenomenon. (See *Appendix C*: Irish Patterns of Cocaine Use)

#### 3. Consequences of Cocaine use

Suicide is the cause of death in up to 10% of cocaine related deaths. Nevertheless, there has been a perception that cocaine is a safe drug and that it improves sports performance, notwithstanding the available evidence disproving this. Cocaine reduces endurance, increases glycogen depletion and elevates both free fatty acid and plasma lactate levels. These biochemical changes are detrimental to performance at prolonged maximal levels. Cocaine can make a sportsperson perceive that they are exerting the maximum effort but the harmful combination of exercise and sport with the drug's effect on the body are cumulative and fatal cardiovascular events may be produced. The pathology associated with cocaine is categorised into those that relate to lifestyle, intoxication, method of drug administration and pharmacology. Accidental death and injury can occur during intoxication and cocaine abuse can lead to impulsivity, aggression and acute psychosis. (See *Appendix D*: Pathology Associated with Cocaine Use)

Most problem cocaine users who seek treatment also use other substances such as opiates and alcohol, with detrimental effects on physical health, mental health and social integration. When used together, these drugs and cocaine can prove more dangerous than when cocaine is used on its own. Drug Treatment Services in Ireland were developed in response to the opiate crisis in the early 1990s. As a consequence, while Irish treatment data indicates that 85% of treatment contacts that are cocaine users are also attending opiate treatment services and that opiates are reported as their main problem drug, this may not give a true indication of the extent of problem cocaine use. Almost one-third of those seeking help for cocaine addiction also meet the diagnostic criteria for alcohol dependence. This means that only a small percentage of individuals are primarily problem cocaine users. Obviously, an analysis of treatment data cannot tell us anything about the number of cocaine users who do treatment. (See Appendix E: Co-dependency with seek opiates/alcohol)

The crime and violence associated with cocaine's transportation and sale, and the celebrity nature of some of its victims, has kept cocaine in the news. In animal studies, animals addicted to cocaine preferred the drug to food, even when it meant they would starve. Some users report being "hooked" after only one use, although these are assumed to be small in number. The controlling effect cocaine has on an addict's life can lead to exclusion of all other facets of life. A habit can cost thousands of *euro* a week to maintain.

#### 4. Treatment Options

Breaking a cocaine habit is not easy. How long and how difficult a task it may be varies from person to person. Treatment can be costly; the cravings for cocaine may persist for long periods of time and retaining individuals in treatment programmes is notoriously difficult.

Approaches to cocaine treatment have modified and developed over the years. The ease of availability of very pure cocaine in the form of *crack* has now meant that a very intense abstinent syndrome can occur and an active approach to treatment is essential to help severely dependent individuals through detoxification.

The comprehensive management of problem cocaine use incorporates paying attention to the medical, psychological and social difficulties that occur. Any treatment must be based on the needs of the individual problem drug user. Goals of treatment include the prevention of a return to substance abuse, control over urges to abuse drugs and providing assistance to problem drug users in improving their personal health and social functioning. (See *Appendix F*: Treatment Options)

Those who have consumed large quantities of stimulants or who are heavily dependent may need <u>short term intensive medical intervention</u> especially if outpatient detoxification has previously failed and if, on stopping cocaine use, intolerable physical or psychiatric symptoms are experienced. Brief in-patient treatment also enables a holistic input into improving general health and nutrition which will often have been neglected by the heavy cocaine user. (See *Appendix H:* Residential Treatment Options)

Progress has been made in developing new psychosocial treatments for cocaine dependence. For many individuals, psychotherapy alone does not provide substantial benefit. Thus, medicines have been sought to augment psychological and social treatments but no medication is consistently effective.

The most unusual and exciting approach to cocaine addiction so far is the development of a vaccine. The ultimate aim of this vaccine would be to prevent those who have become abstinent from cocaine from relapsing and to encourage abstinence in individuals who are current cocaine users. (See *Appendix G*: Acute Intensive Medical Intervention)

After individuals have attained a period of abstinence, the more difficult phase of cocaine treatment - relapse prevention, begins. There are a number of medical options being developed by way of assistance to this very challenging process. (See *Appendix I:* Relapse Prevention)

Psychological interventions may be delivered on an individual or a group basis. These begin to be effective once the individual begins to become stable and is no longer undergoing an acute abstinence syndrome. Motivational Interviewing is a useful strategy for those who have ambivalence about changing their problem drug use. It is one of several interventions which can help facilitate change. It is a client-centred, directive method that encourages self-reflection, and which enhances intrinsic motivation to change by exploring and resolving indecision. (*Appendix J*: Motivational Interviewing)

A behavioural therapy component that is showing positive results in many cocaine-addicted populations is contingency management. Some contingency management programs use a voucher-based system to give positive rewards for staying in treatment and remaining cocaine free. Based on drug-free urine tests, the patients earn points, which can be exchanged for items that encourage healthy living, such as joining a gym, or going to the cinema. (See *Appendix K*: Contingency Management)

A cognitive-behavioural therapy approach to relapse prevention is another option. Cognitive-behavioural treatment is a focused approach to helping cocaine-addicted individuals abstain—and remain abstinent from cocaine and other substances. This approach attempts to help individuals recognise, avoid, and cope; i.e. recognise the situations in which they are most likely to use cocaine, avoid these situations when appropriate, and cope more effectively with a range of problems and problematic behaviours associated with drug abuse. This therapy is also noteworthy because of its compatibility with a range of other treatments such as concomitant drug therapy. It is usually offered in 12-16 sessions over an initial 12 week period, with preliminary data suggesting that those that can achieve initial 3 week abstinence during a 12 week programme generally able to maintain a good outcome 12 months after the programme ends. Supplementary sessions of cognitive behavioural therapy may then be sought and provided on a needs basis. A recent psychological trial comparing Cognitive Behavioural Therapy with Interpersonal Therapy found that Cognitive-Behavioural Therapy was the more effective treatment. However, either treatment was superior to no psychological intervention at all. (See Appendix L: Cognitive Behavioural Therapy)

It is important that individuals with problem cocaine use receive services that match all of their treatment needs. For example, if a patient is unemployed, it may be helpful to provide vocational rehabilitation or career counselling. Similarly, if a patient has marital problems, it may be important to offer couples counselling.

The evidence base on the use of complementary therapies for drug misusing individuals is limited, questionable and even inconsistent. Some evidence has emerged that suggests beneficial effects of auricular acupuncture for drug users. There is widespread agreement that complementary therapies are very useful in terms of engaging or maintaining individuals in treatment. (See *Appendix M:* Complementary Therapies)

#### 5. Irish Experience of Managing Cocaine Addiction

A brief exercise was undertaken to get a snapshot of the Irish experience of service providers in treating problem cocaine use. A questionnaire was devised and telephone contact was made with direct service providers in the 10 HSE areas and 40 questionnaires were sent out to statutory providers and to a sample of voluntary and private treatment providers, in which their experience of managing cocaine addiction in their area was elicited (See *Appendix N:* Providers Questionnaire). A response rate of 68% was obtained. One of the statutory services, the HSE South Western Area, forwarded their policy document on managing problem cocaine. Some distinct patterns of cocaine use emerged from this survey, showing variability in the experience of service providers in dealing with cocaine use:

- Statutory service providers indicated that the largest numbers of those with a primary cocaine problem were in inner city Dublin and its immediate environs, but the numbers were very small compared to those who attended these services for a primary opiate-related difficulty. Larger numbers of service attendees had a secondary cocaine problem or were found to be occasional cocaine users as evidenced by routine urine testing. These services were largely outpatient-based, resource-intensive and a wide variety of clinical staff were employed. Qualified clinically-active named service directors oversaw these services. In these treatment settings, ongoing training and supervision in brief evidence-based outpatient therapies are required for staff. When needed, Residential Treatment Programmes, usually provided by the voluntary sector and often in rural locations, were sought.
- Based on the questionnaire returns the capacity of the voluntary sector to provide evidenced-based treatment programmes varied widely. This is because the range of trained clinical/programme

staff employed by or available to this sector is not extensive.

- A much lesser difficulty in relation to cocaine use was reported by statutory service providers in the greater Dublin area commuter belt and this lessened the further away from Dublin one travelled. In these settings, alcohol, cannabis, ecstasy and amphetamines tended to be the primary problem substance area. A considerable primary cocaine problem was reported however in the North East, and in the Cork area.
- While statutory services offer treatment to those residents in the immediate environs, private service providers may provide treatment to those whose domicile is at a distance i.e. outside the Dublin area. The annual numbers of people presenting with a primary cocaine problem were in single figures in the case of the two private hospital-based service providers whereas a third private facility reported much larger figures. This third, non-hospital based location offered acute medical intervention followed by a residential programme and reported this to be successful in its outcomes.

Many service providers expressed a view that focussing on the treatment of a particular drug i.e. cocaine may not be that helpful and that the availability of psychological programmes and complementary therapies needs to be enhanced for all those with substance misuse problems. Nevertheless, problem cocaine use is an emerging problem in many communities in Ireland. More community based treatment is likely to be required but this entails treatment delivered within the community by skilled professionals reaching into communities to deliver evidence-based treatments in a manner that makes them accessible to those in need. In some instances, community-based treatment is confused with treatment by the community in which an assorted mix of interventions, some of unproven benefit are being delivered by frequently untrained or insufficiently trained staff - those with problem cocaine deserve better.

The results of this short questionnaire are only indicative rather than representative. As addiction services develop throughout the country, and the Regional Drug Task Forces implement their plans, a more comprehensive picture will be attainable in the future.

#### 6. Conclusions & Recommendations

1. There would appear to be a need for *preventative* strategies. These might include *health promotion* and basic factual information in relation to cocaine and its risks to appear in leaflet form and in the media. People should be encouraged to seek website information.

Specific *psycho-education* is needed to expose the misconceptions about enhanced performance in sport by using cocaine.

Professionals from a wide range of disciplines need to be prepared to target schools and youth clubs to demystify cocaine use and expose the dangers.

- 2. A qualitative study of cocaine use focussing on the distinct needs of those whose cocaine use is solely recreational, those who concomitantly have problem opiate use and those with co-existing problem alcohol use is advised as this data is currently unavailable in a systematised way.
- 3. Resources need to be in place to facilitate assessment for those presenting for treatment of problem cocaine use.
- (i) A *basic physical assessment* will be required given the known impact of cocaine on physical health cardiac screening should form part of the baseline assessment as well as blood screening and urinalysis.
- (ii) A *formal substance misuse assessment* e.g. a modified version of The Cannabis & substance use assessment scale (CANUAS) should be carried out on all seeking treatment.
- (iii) A psychological assessment including assessment of individual's readiness to change using, for example, motivational interviewing should be undertaken.
- (iv) A psychiatric assessment should also take place at intake to a drug treatment programme.
- 4. *Tiered interventions* should be possible with drug free outpatient care offered to those who use cocaine and who have a relatively small number of problems identified on the Problem Severity Index (*Appendix H*, Longer Term Treatment Options) at the base of this pyramid of intervention.

Those addicted to a wide range of substances need a logical and sequential programme of detoxification either in an acute inpatient unit or

a day hospital. Although there is no substitutive pharmacological preparation available for those for whom cocaine is their problem drug, there is an evolving evidence base indicating a benefit to be derived from using long established medications that provide symptomatic relief for those who may experience a very profound abstinence syndrome.

Psychological input at an individual or a group basis, social intervention, practical educational/occupational opportunities and complementary therapies also need to be available.

Residential (therapeutic community style) after care programmes that offer places of a number of month's duration should be available to those who are at particular risk of relapse. A wide range of intervention programmes should be available in this kind of setting, representing the apex of the tiered intervention pyramid.

An outpatient based relapse prevention aftercare programme should also be available to which self re-referral should be encouraged.

#### Appendix A: What is cocaine?

Cocaine is a potent drug derived from the leaves of the coca shrub, *Erythroxylon coca*, which grows in the mountainous regions of Peru, Bolivia and Colombia. The leaves of the coca bush were reported to have been used by the Incas in their religious rites as well for medicinal purposes for thousands of years. Traditionally, the leaves have been chewed by local South American people to combat tiredness and hunger, and helping them to work at high altitudes. No adverse effects, such as the development of elation, have been recorded following such use.

Cocaine was first isolated from the coca plant in the mid 1800s and its use in tonics, patent medicines and soft drinks had become widespread in the USA and Europe by the 1880s. It was then prescribed for all sorts of physical and mental ailments, including fatigue, depression, alcoholism Overuse caused many people to become and morphine addiction. dependent on the drug and complications surfaced leading to its use being regulated. Worldwide, the illegal use of cocaine has increased greatly since the 1970s; many people take the drug in social settings, using it because their friends do and for some, serious ongoing problems arise as a consequence. It appears from the literature that people who start using cocaine do not consider the possible harmful effects (Karsh 1999). There has been a perception that cocaine is a safe drug but the pharmacological evidence belies this. Levels of risk behaviour associated with its use are also considerable (Morgan, 2001). Many snort cocaine while others share smoking and injecting equipment to administer the drug, and combining cocaine use with opiates and/or alcohol also occurs commonly.

Habitual snorting of cocaine can damage the mucous membranes lining the nose. Respiratory problems can result from its being smoked, and intravenous injections can lead to abscesses and infections with a risk of HIV infection and hepatitis C when paraphernalia are shared.

Illegal cocaine is a white powder that consists of an active ingredient, cocaine hydrochloride mixed ("cut") with other compounds. It is most commonly taken by "snorting" a small amount through the nose, where it is absorbed through the nasal lining. Some cocaine users inject through a vein to produce a more rapid and powerful effect. Effects that are rapid and even more powerful are experienced by smoking a type of cocaine called *free base* using a glass water pipe. Cocaine is also smoked in a potent pellet form called crack. The injecting and smoking of cocaine account for most drug-related medical emergencies (White & Lambe 2003).

Conventional medical use of cocaine is limited to local anaesthesia and in palliative care. For example, following ear, nose and throat surgery it is a key ingredient of the *Brompton Solution* nose pack. This is applied to reduce post operative pain and bleeding, and a cocaine containing preparation, the *Brompton Cocktail* is used as pain relief in the care of people with terminal illness, with some attendant euphoric effects.

#### **Appendix B: Legislation and Law Enforcement**

In the early 20th Century, mounting concern about opium, morphine and cocaine use led to the *First Opium Convention* in The Hague in 1912, following which the principle of adopting controls over those substances came into being.

In Britain (and Ireland), the *Defence of the Realm Legislation* (1916) was passed as a consequence of concern about cocaine use among members of the armed forces, making it an offence to give or sell cocaine to soldiers. This was followed by the *Dangerous Drugs Acts* (1920) and its Amendment (1923), which resulted in opiates and its derivatives and cocaine only being made available through a doctor's prescription. In the first year of operation there were only 67 prosecutions of which 58 were for cocaine: by 1927 there were only 2 cocaine prosecutions (Ghodse 2002).

Cocaine use in Ireland is currently regulated by the *Misuse of Drugs Act* (1977, & its 1984 Amendments). The coca leaf itself has no recognised medical use. It contains only 0.5% cocaine, the content falling rapidly after harvesting and it is covered under Schedule 1 of the previously mentioned legislation. Schedule 2 forbids the importation, manufacture and use of cocaine for non-medical purposes. It is also illegal to make premises available to be used for the purposes of drug production or supply. Nevertheless, increasing numbers of individuals obtain cocaine illegally and use it for its pleasurable effects - such use is potentially dangerous with many developing a compulsive desire for and a dependence on the drug. Cocaine and crack addicts often lose more than just their physical health, as the addiction encourages anti-social behaviour, profound moodiness, unpredictability and individuals often resort to theft in order to fund their habit. In a US community based study, more than 40% of those with problem cocaine use had a diagnosis of anti-social personality disorder (Reiger et al 1990).

Garda and criminal justice data indicate that cocaine-related offences under the *Misuse of Drugs Act* have steadily increased from 42 seizures in 1995 to 566 in 2003 (An Garda Síochána, 2004), comprising 9% of all drug offences during 2003. Variations in the number of Garda drug seizures may relate to availability of manpower, quality of surveillance, the strength of collaboration with Customs & Excise and serendipity. Nevertheless, seizure numbers are considered to be indirect indicators of the supply and availability of drugs and so increasing cocaine use can be inferred from these figures.

#### **Appendix C: Irish Patterns of Cocaine Use**

A number of surveys of drug use have been carried out in Ireland since 1998, each showing that cocaine use is predominantly behaviour of early adult life and that male use is approximately twice that of females. The combined SLÁN (Survey of Lifestyle, Attitudes and Nutrition) and HBSC (Health Behaviour in School-Aged Children) survey of 1998 reported that 1.8% of adult males and 0.6% of adult females had used cocaine during the previous year.

The ESPAD (European Schools Project on Alcohol and other Drugs) study carried out in 1999 (Hibell *et al* 2000) found that of 16 year old school children, 2% had used cocaine.

In 2001, the findings of a study on the nature of recreational cocaine use in Ireland indicated that the vast majority of such users took cocaine orally or by snorting at weekends (Mayock 2001). These cocaine users did not consider their drug use to be problematic or damaging. Increased availability and use of cocaine, especially among certain groups of recreational drug users, and an increased visibility of cocaine on the club and pub scenes was reported. This finding continues to be reported in the media to the present time as evidenced by an article in *The Sunday Independent* (22, May 2005) with the caption "We are young and goodtime 'Charlie' is the drug of choice". Signs of increased cocaine use amongst opiate users in disadvantaged areas in Dublin were also noted by Paula Mayock, this group were felt to differ substantially from recreational users.

The SLÁN survey of 2002 showed that 3.0% of adult males and 1.9% of adult females had used cocaine during the year prior to survey. In late 2003, the first Irish household drug survey was published, reporting that 3% of the adult population (aged 15-64) had ever used cocaine (National Advisory Committee on Drugs, 2003). Lifetime male cocaine use (4.3%) was found to be more than twice that of females (1.7%), and very young adults (aged 15 - 24) accounted for the highest use with successive age bands declining in use, ultimately with minimal use of cocaine in those aged 45 years and over. Cocaine use ranked as the third illicit drug after cannabis and ecstasy. Extremely small numbers, at that time, reported using "crack" or any more potent forms of cocaine.

Recent European surveys suggest that between 0.5% and 6% of adults have used cocaine at some point in their lives (European Monitoring Centre for Drugs & Drug Addiction, 2004). Cocaine trends are difficult

to monitor at a national level but existing data suggests that cocaine use among young people has risen. Data from the National Drug Treatment Reporting System (NDTRS) has shown that cocaine is mainly reported as a second, third or fourth problem drug and the numbers in treatment have increased substantially in recent years. Those in treatment who reported cocaine to be their primary problem drug increased from 25 in 1996 to 155 in 2002, comprising approximately two percent of all contacts with treatment services (Long et al 2005). In 1996, 121 individuals indicated that cocaine was their second or lesser problem drug, and this figure had risen more than fourteen-fold to 1716 in 2002. In 2000, more than half (54%) of those for whom cocaine was their primary problem drug and the majority (88%) of those who reported cocaine to be their secondary (or lesser) problem drug lived in the Eastern Region. Eighty five percent of the cocaine users referred to were already attending opiate treatment services and service providers reported opiates as the drug user's main problem drug.

The regional spread of cocaine users in both treatment data and Garda Síochána data indicates that the use of cocaine is not just a Dublin phenomenon. However, the number of treatment contacts that have presented to services with cocaine as their primary drug of misuse has been small which would seem to suggest that primary cocaine users do not perceive themselves as requiring treatment for their drug use, or, that that they perceive existing treatment services as being inappropriate to their needs.

The level of poly substance use noted in both the treatment population and the survey of cocaine users represents a challenge for drug education, prevention, treatment, and harm reduction services. For drug treatment services the challenge is to turn what has historically been a predominant opiate focused system into one that meets the needs of cocaine and poly drug misusers. Without the incentive of a substitute drug to offer, such as methadone, a key task is to attract cocaine users into services and retain them long enough to achieving lasting change. In devising a rational treatment strategy to deal with the proliferation of cocaine related problem drug use these complexities need to be taken into account - a trend that is reflected in several other EU countries.

The Dublin-based CityWide Drugs Crisis Campaign (CityWide 2004) reported in March 2004 on a survey they had conducted which showed that 25 out of 27 projects that address drug use have clients reporting for cocaine use. A subsequent account in the *Northside People East* (21, April 2004) reports Anna Quigley, co-ordinator of CityWide as saying

that the government should not let the cocaine problem escalate to the levels of heroin use and that lessons must be learned from dealing with heroin in Ireland. "People in local communities should ask questions of all their local election candidates about their party's commitment to dealing with this issue. The survey findings illustrate the significant levels of availability and use of cocaine right across Dublin city and indicate some of the consequences for users, projects, families and communities. The survey clearly shows that community drug projects are already trying to respond to the problem, as community projects have always tried to respond to the reality of what is happening on the ground. Some 80% of the projects are attempting to provide some level of service for cocaine users and this is placing huge pressure on existing services, already affected by cutbacks. They have clearly identified the need for more training and resources and these must be made available immediately".

A prevalence study of drug use by young people in the Kilbarrack area of Dublin was published in October 2004 (Kilbarrack Coast Community Programme, 2004). A key relevant finding of this survey carried out in a mixed suburban area was that more than half (53.3%) of those who had been early school leavers were current cocaine users as opposed to 6.8% of school students of a similar age (16-18 years). Notwithstanding the fact that the early school leavers were small in number and identified with the assistance of local school projects, the contrast is marked, and may even be starker if one were to include early school leavers who were not engaged with any external agencies.

#### **Appendix D: Pathology Associated with Cocaine Use**

#### **Lifestyle**

Over the last 25 years the price of cocaine has fallen by 75%, making it affordable for a large percentage of the population. The average street price of cocaine in the UK is approximately £30 per gram. In Ireland cocaine is selling for €30-40 per 0.5 gram. The average weekly intake of recreational users is 3g (5-10 in chronic, heavy users). Cocaine suppresses appetite and so diet may be poor. Similarly children of cocaine abusers may be undernourished and at risk of illness. Cocaine is rarely abused in isolation. Polysubstance abuse is common. Cannabis may be used to help users to "come down" following cocaine. Contemporaneous alcohol abuse is widespread because alcohol prolongs the euphoria of cocaine. Considering the addictive nature of cocaine and the frequent polysubstance abuse, criminality is often a necessity of a drug habit leading to numerous risk behaviours e.g. prostitution, carrying a high risk of sexually transmitted disease. Homicide accounts for 20% of deaths in individuals abusing cocaine (Karsh 1999).

#### Intoxication

Cocaine is not hallucinogenic but accidental death and injury can occur during intoxication. Abuse can lead to impulsive, aggressive behaviour, suicidal tendency and acute psychosis. Suicide is the cause of death in up to 10% of cocaine related deaths (Karch 1999).

#### Administration

Snorting cocaine remains the most common method of self-administration in Ireland and the UK. Long-term usage of this method can lead to perforation of the septum in the nose. Oropharyngeal ulceration can also occur. Individuals may experience a blocked nose with persistent rhinitis and rhinorrhoea (Smith *et al* 2002).

Inhalation of crack cocaine can cause acute inflammation and necrosis (gangrene) of the epiglottis, larynx and trachea. Long-term inhalation can lead to lung damage and pneumonia.

Intravenous cocaine abuse is less common, and as it is associated with significant morbidity and mortality. Seizures, cardiac arrest, hypertensive crises and hyperthermia have been reported, particularly among chronic users. "Bodypacking" or "body stuffing" is associated with the transport of cocaine rather than the administration. Both can have fatal consequences similar to those occurring during intravenous overdose (White & Lambe 2003).

#### Pharmacology (& effects)

Cocaine is a stimulant which produces psychological dependence. There is increasing evidence of physical dependence in those who habitually consume very large doses or those who use very pure forms of cocaine such as *crack*. This can lead to the development of an abstinence syndrome, which causes much distress, when drug intake ceases. Cocaine has a very short half-life i.e. it is quickly broken down in the body. Blood levels decrease by 50% within an hour of use, and as a consequence urine and serum screening may be negative despite recent use. Metabolites of cocaine, especially benzolecogomine, can be detected for over a week after use, and in practical terms, identification of this substance indicates recent cocaine usage.

Most users of cocaine seek the feeling of intense pleasure known as a *high* that occurs for a short period after taking cocaine. It causes the nervous system to increase its activity due to a rise in the level of the brain chemical dopamine in the reward centres of the brain and of adrenaline in the nervous system. The regulation of dopamine release in the brain is under the control of a number of factors, including the inhibitory influence of a substance, gamma aminobutyric acid (GABA), the importance of which is important when one looks at treatment options (see pages 24 & 28).

Cocaine increases the body temperature and produces a feeling of euphoria and a sense of well-being. People feel alert and powerful, tend to become more convivial and their thinking seems clearer than usual after use. When the drug effect wears off, usually after 20-40 minutes, individuals often feel low in mood, exhausted, intensely irritable and restless. This is known as the *crash*. Another *line* (or dose) of cocaine may then be taken in an attempt to re-capture the sense of euphoria. As the body becomes more tolerant of the drug and requires larger quantities to experience the *high*, the period of time between successive drug consumption often becomes shorter and shorter. Habitual users may eventually feel that nothing is enjoyable without cocaine, and consequently they may crave the drug constantly. Occasionally, feelings of anxiety and fear occur instead of the expected *high*.

When taken in large doses, cocaine can cause heart failure. Cardiac complications are the most common cause of death among cocaine users and can occur after acute or chronic use. Chest pain, myocardial ischaemia (reduction in blood supply and oxygen) and infarction (injury to heart muscle), cardiac dysrhythmias and sudden death have been

reported. Cocaine acutely increases heart rate, blood pressure and systemic vascular resistance. Oxygen demand is increased while oxygen delivery is reduced. Myocardial ischaemia occurs resulting from an imbalance between supply and demand. This effect is worsened by underlying heart disease. Cocaine related chest pain annually accounts for 37,000 admissions to hospitals in the United States. Chest pain may indicates potentially life-long or life threatening medical problems (Rump *et al* 1995).

As well as the difficulties listed above, smoking crack can lead to pulmonary haemorrhage, vascular lesions and pulmonary oedema (lung congestion). Recurrent episodes of pulmonary damage, together with cocaine related bronchial smooth muscle hypertrophy (increased muscle bulk) may result in right heart failure.

Intracrannial haemorrhage and cerebral infarction have been widely reported to occur after cocaine abuse. Underlying vascular anomalies compound these cerebral injuries. Seizures usually occur in chronic misusers but may occur after the first intoxication.

Psychiatric illness may be the primary manifestation of problem cocaine use or a side effect of it. Acute or chronic psychosis, depression, suicidal ideation and obsessive-compulsive disorder have been reported. Sleep disorders and decreased appetite are common and long-term use of cocaine can lead to impotence in men. The above difficulties may often persist even after discontinuation of the drug. Fatigue, nightmares, insomnia, overeating, agitation and suicidal thoughts have also been described in chronic heavy cocaine users.

Cocaine overdoses are unpredictable and combining cocaine with other drugs, particularly alcohol, is highly risky (Corrigan 2004).

Mothers who use cocaine while they are pregnant risk the health of their babies, as the drug can cause prematurity, low birth weight and birth defects. These babies may be born already addicted.

Recent tests on genetically modified mice carried out by a collaborative research group from the University of Edinburgh, the Cambridgeshire-based Wellcome Trust Sanger Institute and US-based scientists from Duke University, North Carolina showed that cocaine inhibited the brain by destroying a key protein responsible for learning and memory (Yao *et al* 2004). The stark warning from Seth Grant, Professor of Molecular Neuroscience at the University of Edinburgh, who was a member of the research group, was that the molecules which cause drug-induced

changes in the brain are linked to mechanisms involved in learning and memory. The protein affected "is important in remembering people, places and things, so cocaine strikes at the kind of learning which would include, for example, studying for examinations. Cocaine damages the brain - there is no doubt about it" he said on a BBC interview (20, February 2004).

#### **Appendix E: Co-dependency with opiates/alcohol**

Today, as most problem cocaine users also use other substances such as opiates and alcohol, detrimental effects on physical health, mental health and social integration result (Leri *et al* 2003). One study in the USA reported that almost one-third of those seeking help for cocaine addiction also meet the diagnostic criteria for alcohol dependence. This combination can seriously affect the heart and has been a contributory factor in many cocaine related deaths.

Cocaine is co-used with opiate drugs in different ways for different reasons. Some users inject both substances simultaneously in the form of a *speedball* (intravenous heroin and cocaine) to experience the effects of both drugs at the same time. Some use a *speedball* to achieve a greater degree of euphoria, especially when they have insufficient quantities of either drug. It is clear that cocaine can alleviate the severity of symptoms of withdrawal from opiates leading some users to gradually detoxify themselves from opiates in this way when their access to opiate supplies is reduced. Cocaine can speed up the heart immediately, but as the effect of the cocaine wears off, the heroin effect then slows down the heart. The result is that the heart rhythm can become erratic and could result in a heart attack.

#### **Appendix F: Treatment Options**

Approaches to cocaine treatment have modified and developed over the years. The ease of availability of very pure cocaine in the form of crack has now meant that a very intense abstinent syndrome can occur and an active approach to treatment is essential to help severely dependent individuals through detoxification. Poor treatment outcomes may be due to the fact that some cocaine-dependent individuals who have withdrawal symptoms experience cocaine differently to those who do not experience an acute abstinence effect, making it more difficult for them to discontinue cocaine use. There is no substitute drug available to entice cocaine users and stepwise reduction of cocaine use is not recommended because it is not successful (Ghodse 2002). Since medical intervention on its own is not able to address the multi-facetted nature of cocaine addiction, a comprehensive rehabilitation program is essential. Goals of treatment include the prevention of a return to substance abuse, some control over urges to abuse drugs and assistance to individual problem drug users in improving personal health and social functioning. Any treatment must be based on the needs of the individual patient.

There has been considerable debate concerning whether abstinence or harm reduction programs are more effective. While abstinence is obviously the ultimate goal of many treatments, harm reduction messages need to be targeted at cocaine users (Flynn *et al* 1999). Young people are often oblivious to the harms and how to minimize them when using cocaine. Harm reduction approaches are very effective and have not led to an increase in injecting drug use (Boys *et al* 2002). Self-help groups have also been found to be effective among cocaine users (Galanter *et al* 1998).

Cocaine users are a difficult population to engage and drop-out is high. Rapid intake into a treatment programme, providing a treatment approach that addresses the individual's key concerns and having an easy to manage administrative system that takes into account the potential chaos in a user's life e.g. appointment reminders etc. seem to improve attendance.

#### **Appendix G: Acute Medical Detoxification**

Cocaine may be stopped abruptly and acute treatment focuses on psychiatric symptom-relief associated with withdrawal.

Since the effects of cocaine are so pervasive, any substance abuse programs ideally starts with a detoxification programme. In the treatment of cocaine addiction, there are two goals for medications: to help individuals attain an initial period of abstinence and to assist them in avoiding relapse.

Acute detoxification is the process of medical care and pharmacotherapy that seeks to help the problem substance user achieve abstinence and physiologically normal levels of functioning with the minimum of physical and emotional discomfort. Normally suitable medication is given in progressively diminishing amounts to minimise discomfort. The main goal of this phase is to safely manage any medical complications and to attain abstinence. On its own detoxification is unlikely to be effective in achieving a lasting recovery. Detoxification is not designed to address the psychological, social, and behavioural problems associated with addiction and therefore it does not typically produce lasting behavioural changes necessary for recovery. Detoxification is most useful when it incorporates formal processes of assessment and referral to subsequent drug addiction treatment. Stabilisation of acute withdrawal problems is typically completed within 3-5 days but this may need to be extended for up to 14 days, especially for individuals with co-morbid medical or psychiatric problems.

• An acutely low mood with accompanying agitation may result from the stopping of cocaine, and diazepam (Valium) in oral or intravenous form may be required. Antipsychotic medication can reduce psychotic symptoms (e.g. paranoia) and propranolol (Inderal - a medication commonly used to reduce blood pressure) used to regulate distressing withdrawal symptoms such as palpitations and restlessness. It has been found that in a trial of more than 100 cocaine dependent participants, propranolol improved treatment retention and decreased cocaine use among those with severe withdrawal symptoms (Kampman *et al* 2001b).

- In the later stages of cocaine withdrawal, drugs that stimulate the dopamine system (a brain chemical that initially increases but then becomes depleted during heavy cocaine use) have proved successful in managing the depressive symptoms and severe craving characteristic of the second stage of withdrawal. Daily amandatine (a dopamine enhancing drug also used in the treatment of Parkinsons Disease) reduces cocaine craving for up to 3 weeks (Ghodse 2002). It is not effective for all patients who are cocaine dependent, but may be effective for those with severe cocaine withdrawal symptoms (Kampman et al 2000). Those encountering depressive symptoms may respond to desipramine, a classic antidepressant, which also increases the availability of dopamine in the brain (Gawin 1988). One randomised controlled trial in people with depression and cocaine dependence compared desipramine, cognitive behaviour therapy and their combination. The best outcomes came from a combination of both treatments (Carroll et al 1995).
- The most unusual and exciting approach to cocaine addiction so far is the development of a vaccine. Yale University Medical School Psychiatrist Professor Thomas Kosten has worked on a cocaine vaccine for more than a decade. If an individual uses cocaine after this vaccination, the body recognizes the drug as an invader and neutralises it before it can cross the blood-brain barrier. Thus the effects of cocaine are blocked by preventing it from entering the brain. The ultimate aim of this vaccine would be to prevent those who have become abstinent from cocaine from relapsing and to encourage abstinence in individuals who are current cocaine users (Cornish & O'Brien 1998). This vaccine is currently undergoing Phase 2 testing with encouraging preliminary results on a small number of subjects having been presented at the College on Problems of Drug Dependence 66th Annual Scientific Meeting in Puerto Rico, in June 2004 (Martell et al 2004). These trials are supported by the US National Institute of Drug Abuse (NIDA and the Xenova Group plc, a UK-based biopharmaceutical company. So far, 58% of 13 current cocaine users achieved and maintained abstinence during the 12-week study and 42% continued to be cocaine free after six months. Of nine individuals who were abstinent of cocaine given this vaccine 75% of these (relapse prevention study group) maintained abstinence from cocaine use during the 12-week study duration with 100% relapsing after 12 months when antibody levels had dropped.

## **Appendix H: Residential Treatment Options**

Admission to a residential facility enables a break from drug-using situations but this can only provide a temporary respite and a high relapse rate on discharge is likely, hence the necessity for seamless community programmes that individuals slot into upon return to their community. Inpatient detoxification can be offered as a short term medical type intervention followed by a longer term residential (therapeutic community) programme or an outpatient drug-free programme. Residential settings have more successful completion rates for detoxification; however the majority of individuals are still detoxified on an out-patient basis. Generally for cocaine abuse the dropout rate in the first 14-21 days is between 27-47% (Alterman, 1996). There is a sizable and long-standing body of international research evidence for the positive impact of residential programmes (Hubbard *et al* 1998).

Research from the US in which more than 1,600 individuals, all of whom met diagnostic criteria for cocaine dependency, who had participated in 55 different treatment programmes, has yielded very useful information on treatment outcomes (Simpson *et al* 1999). Baseline assessments of problem cocaine-use included a Problem Severity Index (PSI) which comprised a 7-item score that covers drug history (multiple drug use), alcohol dependence, criminal activities, unemployment, low social support from family and friends, depression or anxiety and, relevant for the US, no medical insurance.

#### Elements of the Problem Severity Index (PSI) include:

- Severity of the substance use: the chronicity and severity of abuse has been reliably associated with poorer retention in treatment and quicker relapse following treatment.
- Severity of psychiatric problems: people who abuse substances are likely to have anxiety, affective and personality disorders (Farrell, 1996). Although symptoms may improve early on in treatment, severe psychiatric symptoms are a reliable predictor of dropout and poorer follow-up outcomes (Alterman, 1994).
- *Employment*: unemployed patients are more likely to drop out of treatment prematurely and to relapse. Employment problems are a significant predictor of post-treatment substance abuse (Platt 1995).

• Social Supports: Relationships which are not conflict producing but are supportive of abstinence are hugely important to ongoing rehabilitation. Factors such as the end of a relationship or the loss of a job have a large impact on the abstinence. Social supports and the patient's ability to use social supports will determine how they overcome those difficulties.

Those with a high Problem Severity Index (of 6 or 7), with identified difficulties in multiple areas tended to have best outcomes when they had had 90 days or longer in a residential treatment programme, although despite this, 15% of these still relapsed in the 1-year follow-up period. By comparison, relapse rates were 29% for individuals with a similar Problem Severity Index who had been treated in an out patient drug-free setting for 3 months or longer and 38% of those treated for prescribed stays of at least 21 days in short-term inpatient programs. The results of this study lead to many questions about the particular treatment services involved, the therapeutic engagement process, the influences of individual's treatment history and social context, and cost benefits.

Similar work has been carried out in the UK: The National Treatment Outcome Research Study (NTORS) was the first prospective national study of treatment outcome among a wide range of substance misusers in the United Kingdom. NTORS investigated outcomes for drug misusers treated in residential and community settings. Data were collected by structured interviews at intake to treatment and individuals were followed up at 1 year, 2 years and at 4-5 years. More than 400 individuals from 54 agencies and four treatment modalities were studied. Measures were taken of illicit drug use, injecting and sharing injecting equipment, alcohol use, psychological health and crime. Substantial reductions across a range of problem behaviours were found 4-5 years after patients were admitted to these national treatment programmes delivered under day-today conditions. Crack cocaine and alcohol outcomes at 4-5 years were not however significantly different from intake leading to the conclusion that services for individuals with those difficulties may need to be modified to tackle those problems more effectively (Gossop et al 2002).

The Canadian Health Department Drug Strategy Group has prepared a special report on cocaine treatment and recommendations (Norton *et al* 2000). This has lead to 4 best practice guidelines: 1. Refers to acute symptomatic treatment for cocaine dependence and supports the use of antidepressants for those who become depressed and other substances to reduce other dependencies, particularly when other substances e.g.

opiates or alcohol, are used simultaneously. 2. Refers to the good evidence in the literature that behavioural management procedures, particularly contingency management and cognitive behavioural therapy are effect in reducing cocaine use and retaining individuals in treatment.

3. Refers to enhanced treatment i.e. greater frequency of contact, a comprehensive recruitment plan with more treatment components being more associated with reduced cocaine use at follow-up. 4. Refers to the treatment setting, and while supporting the cost-effectiveness of outpatient/day treatment versus inpatient care, the additional support provided by residential care or inpatient care is acknowledged.

#### **Appendix I: Relapse Prevention - medical options**

Examples of pharmacological strategies for cocaine relapse prevention include blocking cocaine-induced euphoria or reducing cocaine craving. New insights into the effects of cocaine on the chemicals that influence the brain reward system have resulted in several promising relapse-prevention medications.

- Medications that promote the inhibitory effect of gamma aminobutyric acid (GABA) in the brain and as a consequence prevent cocaine-induced release of dopamine could inhibit relapse either by blocking the development of euphoria or by reducing craving caused by exposure to conditioned reminders of prior The anticonvulsant, topiramate (topamax) is an cocaine use. example of such medication, and it is considered a promising preparation for cocaine addiction, especially in people addicted to both cocaine and alcohol, a common combination. The compound may reduce pleasure from the drugs and limit craving. week, double-blind, placebo-controlled pilot trial of topiramate for cocaine dependence involving 40 participants with cocaine dependence, those treated with topiramate were significantly more likely to be abstinent during the last five weeks of the trial compared to participants treated with placebo (Kampman et al 2004).
- Disulfiram (Antabuse) is also a promising relapse-prevention medication. Currently it is used for the treatment of alcohol dependence. In addition to its effects on alcohol metabolism, disulfiram also blocks the break down of cocaine and dopamine in the brain and this leads to extremely high cocaine and dopamine levels when cocaine is ingested (Karamanakos *et al.*, 2001). This does not increase the cocaine-induced high, as one might expect but rather, it makes the high less pleasant by increasing the associated anxiety with aversive consequences (Hameedi *et al* 1995; McCance-Katz *et al* 1998). There are now three published trials showing that disulfiram reduces cocaine use (Carroll *et al* 2004, 1998; George *et al* 2000).

## **Appendix J: Motivational Interviewing**

Motivational Interviewing is a useful strategy for those who have ambivalence about changing their drug using. The appropriate use of this strategy by trained staff can be extremely beneficial within overall case management.

It is one of several interventions which can help facilitate change.

Removing external barriers to change and providing social supports which facilitate change, can serve as motivating factors. Another strategy for those finding change difficult involves shifting the associations around the pain of changing to one where it is a motivating force for change. This shifts the association of pleasure of drug use, to one of pain.

Motivational interviewing is a stimulating and very important intervention in the context of decision making and enhancement of individual's resolution to change. Its success is born out of its novel approach, well structured format and underlying processes based on self-confrontation.

#### **Uses of Motivational Interviewing**

Motivational interviewing greatest use tends to be around contemplation. It can be used at all stages of the pre-contemplation stage and it can help in decision making during contemplation of change. During action and maintenance it can enhance and remind the individual of their resolution to change. Following relapse it enables reassessment.

Individuals with confusion around issues often find the process of motivational interviewing helps to sort thing out for them.

It can be applied to most behaviour where there is a degree of ambivalence.

As individuals identify their benefits, costs, life goals, decisions and subsequent goals, they have uncovered a lot of information for themselves and their counsellor.

#### There are 5 stategies at the heart of Motivational Interviewing

1. The expression of empathy: Reflecting back to the individual client his/her feelings and thoughts, which not only helps build rapport, but in

this process, helps mirror the individual's experience in a way which allows him/her to fully experience their dilemma.

- **2. The development of discrepancy:** The discrepancy is not so much between the positives and not positives of the problem behaviour but between the present behaviour and significant goals which will motivate change.
- **3.** The avoidance of argumentation: Arguments are counter-productive and results in defensiveness. A skilled counsellor will prevent unhelpful conflict in the process of clarifying the issues that enable a decision come to a decision.
- **4. Rolling with resistance:** Otherwise know as verbal judo. The use of reframe or simply changing tack may help maintain momentum towards change.
- **5. Support self-efficacy:** Motivation is partly made up of two main factors importance and confidence. While it may be important to change, it won't happen if the individual feels unable to do it. Every opportunity is taken to support the individual's abilities to aid motivation to change.

There are several steps in setting the scene to conduct motivational interviewing - setting the agenda being one, another looks at the positive aspects of the problem behaviour, while the less positive aspects of this behaviour is also examined. Life goals are highlighted with the client and a decision is sought, with a re-setting of goals.

However, other external influences can also help or hinder change. These factors might include structural issues such as accommodation, employment and recreation opportunities, transport and the quality of peer supports, to mention some. Internal factors such as fear of failure, lack of skills can also inhibit change.

#### **Appendix K: Contingency Management**

Contingency management (CM) treatments are based upon a simple behavioural principle: if behaviour is reinforced or rewarded, it is more likely to occur in the future. The premise behind CM is to utilize these and other reinforcement procedures systematically to modify behaviours of substance abusers in a positive and supportive manner (Petry, 2000). For example, in many CM treatments, patients leave urine specimens multiple times each week and receive explicit rewards for each specimen that tests negative for drugs. These rewards often consist of vouchers that have a monetary basis and can be exchanged for goods and services such as restaurant gift voucher, clothing, sports equipment, cinema tickets and electronic goods.

A series of studies have demonstrated that CM is efficacious in retaining patients in treatment and reducing substance use. Higgins et al (1993) randomly assigned cocaine-dependent outpatients to 12-step-oriented treatment or a CM treatment in which they received individual behavioural therapy in conjunction with vouchers every time they provided a drug-free urine specimen. Patients assigned to the CM group remained in treatment significantly longer and reduced cocaine use relative to patients in the 12-step group. A subsequent trial evaluated whether it was the provision of the contingent vouchers, as opposed to the behavioural therapy, that engendered the improved outcomes (Higgins et al 1994). This study provided intensive behavioural therapy to another sample of cocaine-dependent outpatients, but one group received vouchers contingent upon drug abstinence while the other group did not. Three-quarters of the patients in the voucher condition completed treatment, compared with 40% of patients who received the same behavioural therapy without the vouchers. Over half the patients who received vouchers achieved at least 10 weeks of continuous cocaine abstinence versus 15% in the non-voucher condition.

To further isolate the effects of the vouchers, Higgins *et al* (2000) compared a group of cocaine-dependent outpatients who received vouchers contingent upon negative urinalysis results to another group who received the same amount of vouchers regardless of their urinalysis results. Significantly more of the patients in the contingent condition were able to achieve long periods of cocaine abstinence throughout the study, and the beneficial effects of the contingent condition persisted throughout a one-year follow-up period.

## Appendix L: A Cognitive-Behavioural Approach

Cognitive-behavioural coping skills treatment (CBT) is a short-term, focused approach to helping cocaine-dependent individuals become abstinent from cocaine and other substances. The underlying assumption is that learning processes play an important role in the development and continuation of problem cocaine use and dependence. These same learning processes can be used to help individuals reduce their drug use. CBT attempts to help patients recognise, avoid, and cope. That is, recognise the situations in which they are most likely to use cocaine, avoid these situations when appropriate, and cope more effectively with a range of problems and problematic behaviours associated with substance abuse.

#### Why CBT?

Several important features of CBT make it particularly promising as a treatment for problem cocaine use and dependence:

- CBT is a short-term, comparatively brief approach well suited to the resource capabilities of most clinical programs.
- CBT has been extensively evaluated in rigorous clinical trials and has solid empirical support as treatment for cocaine abuse. In particular, evidence points to the durability of CBT's effects as well as its effectiveness with subgroups of more severely dependent cocaine abusers.
- CBT is structured, goal-oriented, and focused on the immediate problems faced by cocaine users entering treatment who are struggling to control their cocaine use.
- CBT is a flexible, individualised approach that can be adapted to a wide range of patients as well as a variety of settings (inpatient, outpatient) and formats (group, individual).
- CBT is compatible with a range of other treatments the patient may receive, such as pharmacotherapy for cocaine use and/or concurrent psychiatric disorders. Self-help groups such as Cocaine Anonymous (CA) and Alcoholics Anonymous (AA). Family and couples therapy. Vocational counselling, parenting skills, and so on.
- CBT's broad approach encompasses several important common tasks of successful substance abuse treatment.

# CBT has two critical components: (i) Functional analysis & (ii) Skills training

### (i) Functional Analysis

For each instance of cocaine use during treatment, the therapist and patient do a functional analysis to identify the patient's thoughts, feelings, and circumstances before and after the cocaine use. Functional analysis plays a critical role in helping the patient and therapist assess the determinants, or high-risk situations, that are likely to lead to cocaine use and provides insights into some of the reasons the individual may be using cocaine e.g. to cope with interpersonal difficulties, to experience risk or euphoria not otherwise available in the patient's life. Later in treatment, functional analyses of episodes of cocaine use may identify those situations or states in which the individual still has difficulty coping.

#### (ii) Skills Training

CBT can be thought of as a highly individualized training program that helps problem cocaine users unlearn old habits associated with cocaine abuse and learn or relearn healthier skills and habits. By the time the level of substance use is severe enough to warrant treatment, patients are likely to be using cocaine as their single means of coping with a wide range of interpersonal and intrapersonal problems. This may occur for several reasons:

- The individual may have never learned effective strategies to cope with the challenges and problems of adult life, as when substance use begins during early adolescence.
- Although the individual may have acquired effective strategies at one time, these skills may have decayed through repeated reliance on substance use as a primary means of coping. These patients have essentially forgotten effective strategies because of chronic involvement in a drug-using lifestyle in which the bulk of their time is spent in acquiring, using, and then recovering from the effects of drugs.
- The individual's ability to use effective coping strategies may be weakened by other problems, such as cocaine misuse with concurrent psychiatric disorders. Because problem cocaine users are a heterogeneous group and typically come to treatment with a wide range of problems, skills training in CBT are made as broad as possible. The first few sessions focus on skills related to initial control of cocaine use (e.g. identification of high-risk situations, coping with thoughts about cocaine use). Once these basic skills are mastered, training is broadened to include a range of other problems with which the individual may have difficulty coping

(e.g. social isolation, unemployment). In addition, to strengthen and broaden the individual's range of coping styles, skills training focuses on both intrapersonal (e.g. coping with craving) and interpersonal (e.g. refusing offers of cocaine) skills. Patients are taught these skills as both specific strategies (applicable in the here and now to control cocaine use) and general strategies that can be applied to a variety of other problems. Thus, CBT is not only geared to helping each patient reduce and eliminate substance use while in treatment, but also to imparting skills that can benefit the patient long after treatment.

#### **Critical Tasks**

CBT addresses several critical tasks that are essential to successful substance abuse treatment.

Fostering the motivation for abstinence - an important technique used to enhance the patient's motivation to stop cocaine use is to do a decisional analysis which clarifies what the individual stands to lose or gain by continued cocaine use.

Teaching coping skills - this is the core of CBT - to help patients recognize the high-risk situations in which they are most likely to use substances and to develop other, more effective means of coping with them.

Changing reinforcement contingencies - by the time treatment is sought, many patients spend most of their time acquiring, using, and recovering from cocaine use to the exclusion of other experiences and rewards. In CBT, the focus is on identifying and reducing habits associated with a drug-using lifestyle by substituting more enduring, positive activities and rewards.

Fostering management of painful affects - skill training also focuses on techniques to recognise and cope with urges to use cocaine; this is an excellent model for helping patients learn to tolerate other strong affects such as depression and anger.

Improving interpersonal functioning and enhancing social supports - CBT includes training in a number of important interpersonal skills and strategies to help patients expand their social support networks and build enduring, drug-free relationships.

#### **Parameters of CBT**

#### **Format**

An individual format is preferred for CBT because it allows for better tailoring of treatment to meet the needs of specific individuals. Patients receive more attention and are generally more involved in treatment when they have the opportunity to work with and build a relationship with a single therapist over time. Individual treatment affords greater flexibility in scheduling sessions and eliminates the problem of either having to deliver treatment in a "rolling admissions" format or asking patients to wait several weeks until sufficient numbers of patients are recruited to form a group. Also, the comparatively high rates of retention in programs and studies may reflect, in part, particular advantages of individual treatment.

However, a number of researchers and clinicians have emphasized the unique benefits of delivering treatment to substance users in the group format (e.g., universality, peer pressure). It is relatively straightforward to adapt the treatment for groups. This generally requires lengthening the sessions to 90 minutes to allow all group members to have an opportunity to comment on their personal experiences in trying out skills, giving examples, and participating in role-playing. Treatment will also be more structured in a group format because of the need to present the key ideas and skills in a more didactic, less individualized format.

#### Length

CBT has been offered in 12 to 16 sessions, usually over 12 weeks. This comparatively brief, short-term treatment is intended to produce initial abstinence and stabilization. However, brief treatment is not sufficient to produce stabilization or lasting improvement. Booster sessions of CBT during the 6 months following the initial treatment phase may improve outcome.

#### Setting

CBT treatment is usually delivered on an outpatient basis. Skills' training is most effective when patients have an opportunity to practice new skills and approaches within the context of their daily routine.

#### **Patients**

CBT has been evaluated with a broad range of problem cocaine users. Those who are environmentally and medically stable (as assessed by a pre-treatment physical examination) are generally suitable for CBT. Those who have psychotic or bipolar disorders and are not stabilised on medication or those who have no stable living arrangements are generally *not appropriate* for CBT delivered on an out-patient basis. Neither are those who have other concurrent substance dependence disorders, with the exception of alcohol or cannabis dependence - the need for alcohol detoxification in the former is essential before commencement.

No significant differences have been found in outcome or retention for patients who seek treatment because of court or probation pressure and those who have DSM-IV diagnoses of antisocial personality disorder or other Axis II disorders, nor has outcome varied by patient race/ethnicity or gender.

CBT mere delivery of skills training without grounding in a positive therapeutic relationship leads to a dry, overly didactic approach that alienates or bores most patients and ultimately has the opposite effect of that intended. It is important to recognize that CBT is thought to exert its effects through this intricate interplay of common and unique factors.

A major task of the therapist is to achieve an appropriate balance between attending to the relationship and delivering skills training. For example, without a solid therapeutic alliance, it is unlikely that an individual will stay in treatment, be sufficiently engaged to learn new skills, or share successes and failures in trying new approaches to old problems. Conversely, empathic delivery of skills training as tools to help patients manage their lives more effectively may form the basis of a strong working alliance.

#### **Appendix M: Complementary Treatments**

The conclusions of the British Task Force to Review Services for Drug Misusers in 1996 were that most of the reports on the use of complementary therapies in drug treatment were "fairly positive but there are almost no data to support claims of treatment effectiveness. It is difficult to subtract out the general effect of care and attention to isolate the effect of the specific intervention. These therapies do apparently attract some drug misusers e.g. cocaine misusers, into treatment services". In 1997, 40% of residential treatment settings for drug users in Britain had complementary therapies available as an optional part of a comprehensive treatment programme (SCODA, 1997). These include auricular (ear) acupuncture, reflexology and massage to name some. Acudetox (acupuncture for the purpose of detoxification) is clearly felt to be nurturing and allows other aspects of a comprehensive programme to be more confrontative.

Some evidence has emerged that suggests beneficial effects of auricular acupuncture for drug users. Studies that have randomised individuals to real or "sham" acupuncture points have not demonstrated any benefit for acupuncture points however individuals "acupuncture", irrespective of its authenticity, tended to remain in treatment longer than those who were not (Otto et al 1998). Subsequent work repudiated this, finding benefit from neither real nor sham acupuncture, nor any difference in terms of treatment retention nor cocaine use/craving during the study phase. A linked study examining outpatient outcomes in which different intensities of acupuncture in authentic acupuncture sites did not confer any benefit to the procedure (Bullock et al 1999).

It is apparent from accounts in the popular press and media in Ireland that complementary therapies are increasingly being used in cocaine treatment settings. Ireland's first dedicated cocaine and crack-cocaine treatment programme was described on RTÉ the day it was officially launched, having opened a year earlier (14, April 2005, *Morning Ireland*). The treatment programme at Croí Nua run by Addiction Response in Crumlin was highlighted as being unusual in that it uses a host of alternative therapies. A number of the participants in this programme were

interviewed and these testified to the benefit for them in having complementary therapies available. This experience has been borne out by service user satisfaction surveys in London where service users positively rate complementary therapies which in turn is felt to have a positive impact on client retention (Burns 1999). An expert US government panel has found the evidence for acupuncture in addiction not as strong as for other conditions but that it was sufficiently convincing to recommend its use as part of a holistic addiction treatment programme (National Institutes of Health 1997).

Those delivering complementary therapies need to be fully qualified and capable of delivering these treatments within good practice guidelines of the relevant professional bodies, thus making a truly comprehensive treatment package possible for those with problem cocaine-use.

## Appendix N: Questionnaire to Service Providers

1. What type of cocaine treatment interventions does your servic <i>provide</i> <sup>1</sup> ?
Provide list of possible interventions e.g counselling (please specify type); withdrawa symptom relief <sup>2</sup> ; residential treatment programme, complementary treatments etc.
2. What categories of clinical/programme staff does your service employ? List number of each, indicating Fulltime (F/T) or Part-time
(P/T)
Counsellor
General practitioner
Nurse
Key worker
Psychiatrist
Psychologist
Project worker
Youth worker
Other (s)
Offici (s)
3. What type of cocaine treatment interventions does your servic refer <sup>3</sup> people to?
Provide list of possible interventions

<sup>&</sup>lt;sup>1</sup> This refers to interventions that are available and are within the resources of the service.

<sup>2</sup> This refers to a time limited medical intervention until withdrawal symptoms subside

<sup>3</sup> This refers to external referrals on the basis of this service not being available internally.

4. Who oversees your treatment programme?
Name (optional)
Qualifications & job title (please indicate)
5. Estimate how many of your service users in the past year have had
<b>a.</b> A primary cocaine problem
<b>b.</b> A secondary cocaine problem(Can you indicate their primary problem drug?)
Based on your experience of providing a service to those with problem cocaine use, could you estimate your view of the benefit of the following treatment modalities were these to form part of a holistic treatment package: Please circle the appropriate option on each of questions 6 - 10:
6. Acute medical intervention (10-14 days duration), which would deal with symptomatic relief of withdrawal symptoms. Please indicate the option below that applies:
* Little/no use - less than 10% of my treatment contacts would use/benefit.
* Limited use - approximately 20 - 40% of my treatment contacts would use/benefit.
* Considerable use - more than 50% of my treatment contacts would use/benefit.

7. Comprehensive Residential Treatment Programme (minimum of 12 weeks duration), which would be offered as a relapse prevention measure to those having stopped cocaine use. Please indicate the option below that applies:

\* Little/no use - less than 10% of my treatment contacts would use/benefit.

\* Limited use - approximately 20 - 40% of my treatment contacts would use/benefit.

\* Considerable use - more than 50% of my treatment contacts would use/benefit.

If you would like to comment further on this service component, please refer Q. 11 (overleaf).

**8.** Acute outpatient treatment using evidence-based psychological approaches e.g. motivational interviewing<sup>4</sup>, cognitive behaviour therapy (CBT)<sup>5</sup>, contingency management approach<sup>6</sup>, and community reinforcement approach<sup>7</sup>. Please indicate the option below that applies:

\* Little/no use - less than 10% of my treatment contacts would use/benefit.

\* Limited use - approximately 20 - 40% of my treatment contacts would use/benefit.

<sup>&</sup>lt;sup>4</sup> **Motivational interviewing** is a client-centred, directive method, which enhances intrinsic motivation to change by exploring and resolving ambivalence.

<sup>&</sup>lt;sup>5</sup> **CBT** in this instance would help individuals to recognise, avoid, and cope in the matter of their problem drug use i.e. recognise situations in which they are most likely to use cocaine, avoid these situations when appropriate, and cope more effectively with a range of problems and problematic behaviours associated with drug abuse.

<sup>&</sup>lt;sup>6</sup> Contingency Management for problem cocaine use uses a voucher-based system to give positive rewards for staying in treatment and remaining cocaine free. It is based on drug-free urine tests which can be exchanged for items that encourage healthy living, such as joining a gym, or going to the cinema.

<sup>&</sup>lt;sup>7</sup> **Community Reinforcement Approach** works towards initiating changes to lifestyle and social environment so that abstinence becomes more rewarding than problem substance use.

\* Considerable use -more than 50% of my treatment contacts would use/benefit.

If yes, could you indicate the number of staff (......) trained to deliver such programmes?

If you would like to comment further on this service component, please refer Q. 11 (overleaf).

- **9. Social treatment** e.g. vocational rehabilitation; career counselling; couples counselling. Please indicate the option below that applies:
- \* Little/no use less than 10% of my treatment contacts would use/benefit.
- \* Limited use approximately 20-40% of my treatment contacts would use/benefit.
- \* Considerable use more than 50% of my treatment contacts would use/benefit.

If yes, could you indicate the number of staff (......) trained to deliver such a programme?

If you would like to comment further on this service component, please refer Q. 11 (overleaf).

- **10.** Complementary Therapies e.g. auricular (ear) acupuncture, reflexology, massage or other (specify......). Please indicate the option below that applies:
- \* Little/no use less than 10% of my treatment contacts would use/benefit.
- \* Limited use approximately 20-40% use of my treatment contacts would use/benefit.
  - \* Considerable use more than 50% of my treatment

contacts would use/benefit.

If yes, could you indicate the number of staff (......) trained to deliver such a programme?

If you would like to comment further on this service component, please refer Q. 11 (overleaf).

11. Please use free text (& on this or additional pages/back of page if needs be) to indicate your view of managing cocaine addiction that you feel should receive attention:

Name & your contact details (optional, but it may be helpful to clarify responses)	
	•••

#### Please return ASAP in SAE

#### References

Alterman A (1996) Prediction of attrition from day hospital treatment in lower socioeconomic cocaine-dependent men. Drug and Alcohol Dependency, **40**, 227-233.

An Garda Síochána (2004) *Annual Report 2003*. Dublin: Oifig an tSoláthair.

Boys A, Dobson J, Marsden J *et al* (2002) 'Rich Man's Speed': A qualitative study of young cocaine users. Drug Education Prevention and Policy, **9** (2), 195-210.

Budney AJ & Higgins ST (1998) Therapy Manuals for Drug Addiction, Manual 2. A Community Reinforcement Plus Vouchers Approach: Treating Cocaine Addiction. Maryland: National Institute on Drug Abuse.

Bullock ML, Kiesuk TJ, Pheley AM *et al* (1999) Auricular acupuncture in the treatment of cocaine abuse: a study of efficacy and dosing. Journal of Substance Abuse Treatment, **16** (1), 31-38.

Burns S (1999) Southall Alcohol Advisory Service. The complementary therapy service (Evaluation Report). London: Alcohol Concern

Carroll KM (1998) Therapy Manuals for Drug Addiction, Manual 1. *A Cognitive Behavioural Approach: Treating Cocaine Addiction.* Maryland: National Institute on Drug Abuse.

Carroll KM, Fenton LR, Ball SA *et al* (2004) Efficacy of disulfiram and cognitive behavior therapy in cocaine-dependent outpatients: a randomized placebo-controlled trial. Arch Gen Psychiatry **61(3)**, 264-272.

Carroll KM, Nich C, Ball SA *et al* (1998) Treatment of cocaine and alcohol dependence with psychotherapy and disulfiram. Addiction **93(5)**, 713-727.

Carroll KM, Nich C & Rounsaville B (1995) Differential symptom reduction in depressed cocaine abusers treated with psychotherapy and pharmacotherapy. Journal of Nervous & Mental Disease, **183**, 251-259.

CityWide Drugs Crisis Campaign (2004) <u>Cocaine in local communities:</u> <u>survey of community drug projects</u>. Dublin: CityWide Drugs Crisis Campaign.

Cornish JW & O'Brien CP (1998) Developing new medications to treat cocaine addictions. Current Opinion in Psychiatry, **11**, 249 -251.

Corrigan D (2004) National Drugs Awareness Campaign Press Release, October 2004.

European Monitoring Centre for Drugs & Drug Addiction (2004) *The State of the Drugs Problem in the European Union and Norway, Annual Report, 2004.* Luxembourg: Office for the Official Publications of the European Communities.

Flynn PM, Kristiansen JV & Porto RL (1999) Costs and benefits of treatment for cocaine addiction. Drug and Alcohol Dependence, **57(2)**, 167-174.

Galanter M, Dermatis H, Egelko S *et al* (1998) Homelessness and mental illness in a professional and peer led cocaine treatment clinic. Psychiatric Services, **49** (**4**), 533-535.

Gawin FH (1988) Chronic neuropharmacology of cocaine: progress in pharmacotherapy. Journal of Clinical Psychiatry (Suppl), **49**, 11-16.

George TP, Chawarski MC, Pakes J *et al* (2000) Disulfiram versus placebo for cocaine dependence in buprenorphine-maintained subjects: a preliminary trial. Biol Psychiatry **47(12)**, 1080-1086.

Ghodse H (2002) <u>Drugs and Addictive Behaviour, Third Edition</u>. Oxford: Blackwell Science.

Gossop M, Marsden J & Stewart D (2001) The National Treatment Outcome Service: Changes in substance use, health and criminal behaviour during the 5 years after intake. London: National Addiction Centre (Crown Copyright).

Hameedi FA, Rosen MI, McCance-Katz EF *et al* (1995) Behavioral, physiological, and pharmacological interaction of cocaine and disulfiram in humans. Biol Psychiatry **37(8)**, 560-563.

Hibell B, Andersson B, Ahlstrom S *et al* (2000) *The 1999 ESPAD Report: Alcohol and other drug use among students in 30 European countries* Stockholm and Strasbourg: The Swedish Council for Information on Alcohol and Other Drugs, Stockholm, and Council of Europe, Pompidou Group, Strasbourg.

Higgins ST, Budney AJ, Bickel WK *et al* (1993), Achieving cocaine abstinence with a behavioral approach. Am J Psychiatry **150(5)**:763-769.

Higgins ST, Budney AJ, Bickel WK *et al* (1994), Incentives improve outcome in outpatient behavioral treatment of cocaine dependence. Arch Gen Psychiatry **51**(7):568-576.

Higgins ST, Wong CJ, Badger GJ *et al* (2000), Contingent reinforcement increases cocaine abstinence during outpatient treatment and 1 year of follow-up. J Consult Clin Psychol **68(1)**:64-72.

Hubbard RL, Craddock SG, Flynn, PM *et al* (1998) Overview of 1-year follow-up outcomes in the Drug Abuse Treatment Outcome Study (DATOS). Psychology of Addictive Behaviors **11(4)**, 291-298.

Kampman KM, Volpicelli JR, Alterman AI *et al* (2000) Amantadine in the treatment of cocaine-dependent patients with severe withdrawal symptoms. Am J Psychiatry, **157(12)**, 2052-2054.

Kampman KM, Alterman AI, Volpicelli JR *et al* (2001a) Cocaine withdrawal symptoms and initial urine toxicology results predict treatment attrition in outpatient cocaine dependence treatment. Psychol Addict Behav **15(1)**, 52-59.

Kampman KM, Pettinati H, Lynch KG et al (2004) A pilot trial of topiramate for the treatment of cocaine dependence. Drug Alcohol Depend **75(3):**233-240.

Kampman KM, Volpicelli JR, Mulvaney F *et al* (2001b) Effectiveness of propranolol for cocaine dependence may depend on cocaine withdrawal symptom severity. Drug Alcohol Depend **63(1)**, 69-78.

Karamanakos PN, Pappas P, Stephanou P *et al* (2001) Differentiation of disulfiram effects on central catecholamines and hepatic ethanol metabolism. Pharmacol Toxicol **88(2)**, 106-110.

Karch SB (1999). Cocaine: history, use and abuse. Journal of the Royal Society of Medicine, **92**, 393-397

Kilbarrack Coast Community Programme (2004) *A prevalence study of drug use by young people in a mixed suburban area*. Dublin: National Advisory Committee on Drugs.

Leri F, Bruneau J & Stewart J (2003) Understanding poly drug use: review of heroin and cocaine co-use. Addiction, **98**, 7-22.

Long J, Kelly F & Lynn E (2005) <u>Trends in treated problem drug use in Ireland</u>, <u>1998 to 2002</u>. Occasional Paper **18**. Dublin: Health Research Board.

Martell BA, Mitchell E, Poling J *et al* (2004) Vaccine pharmacotherapy for the treatment of cocaine dependence. Presented at College on Problems of Drug Dependence 66th Annual Meeting. San Juan, Puerto Rico; June 13.

McCance-Katz EF, Kosten TR & Jatlow P (1998) Disulfiram effects on acute cocaine administration. Drug Alcohol Depend **52(1)**, 27-39.

Mayock P (2001) Cocaine Use in Ireland: an exploratory study. In Moran R (ed.) <u>A Collection of Papers on Drug Issues in Ireland.</u> Dublin: Health Research Board.

Morgan, M. (2001) <u>Drug use prevention – overview of research.</u> Dublin: National Advisory Committee on Drugs.

Miller W & Rollnick S (1991) <u>Motivational Interviewing: Preparing</u> People to Change Addictive Behaviour. New York: Guilford Press.

National Advisory Committee on Drugs (2003) *An Overview of Cocaine use in Ireland.* Dublin: Oifig an tSoláthair.

NACD and DAIRU (National Advisory Committee on Drugs; and Drug and Alcohol Information and Research Unit) (2003). <u>Drug use in Ireland & Northern Ireland</u>. <u>Bulletin 1</u>. First results from the 2002/2003 drug <u>prevalence survey</u>.

National Institutes of Health (1997) NIH Consensus Statement, **15 (5)**: Acupuncture. Maryland: National Institutes of Health (nih.//consensus.nih.gov.)

Norton GR, Weinrath M & Bonin M (2000) <u>Cocaine Use:</u> <u>Recommendations in Treatment & Rehabilitation</u>. Canada's Drug Strategy. Ottawa: Health Canada

O'Brien CP (1997) A range of research-based pharmacotherapies for addiction. Science, **278**, 66-70.

Otto KC *et al* (1998) Auricular acupuncture as an adjunctive treatment for cocaine addiction. American Journal on Addictions, **7(2)**, 164-170.

Petry NM, Martin B, Cooney JL *et al* (2000), Give them prizes and they will come: contingency management for treatment of alcohol dependence. J Consult Clin Psychol **68(2)**:250-257.

Platt. J. J. (1995) Vocational rehabilitation of drug abusers. Psychological Bulletin, 117, 416-435.

Reiger DA, Farmer RE, Rae DS *et al* (1990) Co-morbidity of mental disorders with alcohol and other drug abuse. Results from the Epidemiological Catchment Area Study. JAMA, **262**, 2511-2518.

Rump AFE, Theisohn M. & Klaus W (1995) The pathophysiology of cocaine cardiotoxicity. Forensic Science International, **71**:103-115

SCODA (1997) *New options: changing residential and social care of drug users.* London: Standing Conference on Drug Abuse.

Simpson D, Joe G, Fletcher, B *et al* (1999) A national evaluation of treatment outcomes for cocaine dependence. Archives of General Psychiatry, **56**, 507-514.

SLÁN and HBSC (2002) Survey of Lifestyle, Attitudes and Nutrition (SLÁN) & The Irish Health Behaviour in School-Aged Children Survey (HBSC). Galway NUI: Centre for Health Promotion Studies.

Smith JC, Kacker A & Anand VK(2002) Midline nasal and hard palate destruction in cocaine abusers and cocaine: role in rhinologic practice. *Journal of ENT*, **81(3)**:172-177.

White SM & Lambe CJT (2003). The pathophysiology of cocaine abuse. Journal of Clinical Forensic Medicine, **10**, 273-279.

Yao W-D, Gainetdinov RR, Arbuckle MI *et al* (2004): Identification of PSD-95 as a Regulator of Dopamine-Mediated Synaptic and Behavioral Plasticity. Neuron **41** (4), 625 - 638.

# Appendix 2

Some facts about the cost of Cocaine use in Ireland

## Some facts about the cost of cocaine use in Ireland

- €37 million worth of Cocaine seized between 1995 and 2004 (Sunday Tribune, 22<sup>nd</sup> May '05)
- 10 Times that amount has found its way onto the streets (international norm)
- Street value of Cocaine €100,000 per kg
- Price has fallen by 75% to €30-40 per 0.5g in Ireland
- Average weekly use is 3g (5-10g in chronic users)
- Cocaine use among young people has risen since 1996 male: female ratio remains 2:1. Highest in 15-24 year olds (5.1%).
- In 2000, primary problem cocaine use comprised 2% of treatment contacts and 54% of these lived in the East
- Males increased use from 1.8% in 2001 to 3% in 2002
- Recreational users do not consider themselves to be at risk and these appear to differ from users from disadvantaged areas
- Risk-taking behaviour (prostitution, trafficking of drugs)

#### **State Resources**

- Garda resources Criminal gangs-gun culture
- Health Service Resources HIV, hepatitis and related illness
- 25 out of 27 projects that address drugs have clients reporting for cocaine use
- Prison (70% Drug related)
- Customs National Drug Team (85 staff)
- Patrol vessel (RCC Suirbeir).

## Appendix 3

Membership of the Joint Committee on Arts, Sport, Tourism, Community, Rural and Gaeltacht Affairs An Comhchoiste um Ghnóthaí Ealaíon, Spóirt, Turasóireachta, Pobail, Tuaithe agus Gaeltachta Teach Laighean Baile Átha Cliath 2



Joint Committee on Arts, Sport, Tourism, Community, Rural and Gaeltacht Affairs Leinster House Dublin 2

**(**01) 618 3000 Fax (01) 618 4123 / 618 4124

## LIST OF MEMBERS

## **Deputies:**

James Breen (Ind)
Michael Collins (Ind)
Jimmy Deenihan (FG)
Jim Glennon (FF) [Vice-Chairman]
Cecilia Keaveney (FF) [Chairman]
Peter Kelly (FF)
Dinny McGinley (FG)
Fiona O'Malley (PD)
Brian O'Shea (Lab)
Jack Wall (Lab)
G.V. Wright (FF)

#### **Senators:**

Brendan Daly (FF)
Frank Feighan (FG)
Joe McHugh (FG)
Labhrás Ó Murchú (FF)
Joe O'Toole (Ind)
Kieran Phelan (FF)

## Appendix 4

**Orders of Reference of the Joint Committee** 

#### **Orders of Reference**

## Dáil Éireann on 16 October 2002 ordered:

- "(1) (a) That a Select Committee, which shall be called the Select Committee on Arts, Sport, Tourism, Community, Rural and Gaeltacht Affairs, consisting of 11 members of Dáil Éireann (of whom 4 shall constitute a quorum), be appointed to consider -
  - (i) such Bills the statute law in respect of which is dealt with by the Department of Arts, Sport and Tourism and the Department of Community, Rural and Gaeltacht Affairs:
  - (ii) such Estimates for Public Services within the aegis of the Department of Arts, Sport and Tourism and the Department of Community, Rural and Gaeltacht Affairs; and
  - (iii) such proposals contained in any motion, including any motion within the meaning of Standing Order 157 concerning the approval by the Dáil of international agreements involving a charge on public funds,

as shall be referred to it by Dáil Éireann from time to time.

- (b) For the purpose of its consideration of Bills and proposals under paragraphs (1)(a)(i) and (iii), the Select Committee shall have the powers defined in Standing Order 81(1), (2) and (3).
- (c) For the avoidance of doubt, by virtue of his or her ex officio membership of the Select Committee in accordance with Standing Order 90(1), the Minister for Arts, Sport and Tourism and the Minister for Community, Rural and Gaeltacht Affairs (or a Minister or Minister of State nominated in his or her stead) shall be entitled to vote.
- (2) (a) The Select Committee shall be joined with a Select Committee to be appointed by Seanad Éireann to form the Joint Committee on Arts, Sport, Tourism, Community, Rural and Gaeltacht Affairs to consider -

- (i) such public affairs administered by the Department of Arts, Sport and Tourism and the Department of Community, Rural and Gaeltacht Affairs as it may select, including, in respect of Government policy, bodies under the aegis of those Departments;
- (ii) such matters of policy for which the Minister for Arts, Sport and Tourism and the Minister for Community, Rural and Gaeltacht Affairs are officially responsible as it may select;
- (iii) such related policy issues as it may select concerning bodies which are partly or wholly funded by the State or which are established or appointed by Members of the Government or by the Oireachtas;
- (iv) such Statutory Instruments made by the Minister for Arts, Sport and Tourism and the Minister for Community, Rural and Gaeltacht Affairs and laid before both Houses of the Oireachtas as it may select;
- (v) such proposals for EU legislation and related policy issues as may be referred to it from time to time, in accordance with Standing Order 81(4);
- (vi) the strategy statement laid before each House of the Oireachtas by the Minister for Arts, Sport and Tourism and the Minister for Community, Rural and Gaeltacht Affairs pursuant to section 5(2) of the Public Service Management Act, 1997, and the Joint Committee shall be so authorised for the purposes of section 10 of that Act;
- (vii) such annual reports or annual reports and accounts, required by law and laid before either or both Houses of the Oireachtas, of bodies specified in paragraphs 2(a)(i) and (iii), and the overall operational results, statements of strategy and corporate plans of these bodies, as it may select;

Provided that the Joint Committee shall not, at any time, consider any matter relating to such a body

which is, which has been, or which is, at that time, proposed to be considered by the Committee of Public Accounts pursuant to the Orders of Reference of that Committee and/or the Comptroller and Auditor General (Amendment) Act, 1993;

Provided further that the Joint Committee shall refrain from inquiring into in public session, or publishing confidential information regarding, any such matter if so requested either by the body or by the Minister for Arts, Sport and Tourism and the Minister for Community, Rural and Gaeltacht Affairs; and

(viii) such other matters as may be jointly referred to it from time to time by both Houses of the Oireachtas,

and shall report thereon to both Houses of the Oireachtas.

- (b) The quorum of the Joint Committee shall be five, of whom at least one shall be a member of Dáil Éireann and one a member of Seanad Éireann.
- (c) The Joint Committee shall have the powers defined in Standing Order 81(1) to (9) inclusive.
- (3) The Chairman of the Joint Committee, who shall be a member of Dáil Éireann, shall also be Chairman of the Select Committee.".

## Seanad Éireann on 17 October 2002 (\*23 October 2002) ordered:

- (1) (a) That a Select Committee consisting of 6 members\* of Seanad Éireann shall be appointed to be joined with a Select Committee of Dáil Éireann to form the Joint Committee on Arts, Sport, Tourism, Community, Rural and Gaeltacht Affairs to consider-
  - (i) such public affairs administered by the Department of Arts, Sport and Tourism and the Department of Community, Rural and Gaeltacht Affairs as it may select, including, in respect of Government policy, bodies under the aegis of those Departments;
  - (ii) such matters of policy for which the Minister for Arts, Sport and Tourism and the Minister for Community, Rural and Gaeltacht Affairs are officially responsible as it may select;
  - (iii) such related policy issues as it may select concerning bodies which are partly or wholly funded by the State or which are established or appointed by Members of the Government or by the Oireachtas;
  - (iv) such Statutory Instruments made by the Minister for Arts, Sport and Tourism and the Minister for Community, Rural and Gaeltacht Affairs and laid before Houses of the Oireachtas as it may select;
  - (v) such proposals for EU legislation and related policy issues as may be referred to it from time to time, in accordance with Standing Order 65(4);
  - (vi) the strategy statement laid before each House of the Oireachtas by the Minister for Arts, Sport and Tourism and the Minister for Community, Rural and Gaeltacht Affairs pursuant to section 5(2) of the Public Service Management Act, 1997, and the Joint Committee shall be so authorised for the purposes of section 10 of that Act;

\_

<sup>\*</sup> by the substitution of '6 members' for '4 members'.

(vii) such annual reports or annual reports and accounts, required by law and laid before both Houses of the Oireachtas, of bodies specified in paragraphs 1(a)(i) and (iii), and the overall operational results, statements of strategy and corporate plans of these bodies, as it may select;

Provided that the Joint Committee shall not, at any time, consider any matter relating to such a body which is, which has been, or which is, at that time, proposed to be considered by the Committee of Public Accounts pursuant to the Orders of Reference of that Committee and/or the Comptroller and Auditor General (Amendment) Act, 1993;

Provided further that the Joint Committee shall refrain from inquiring into in public session, or publishing confidential information regarding, any such matter if so requested either by the body concerned or by the Minister for Arts, Sport and Tourism or the Minister for Community, Rural and Gaeltacht Affairs;

and

(viii) such other matters as may be jointly referred to it from time to time by both Houses of the Oireachtas,

and shall report thereon to both Houses of the Oireachtas.

- (b) The quorum of the Joint Committee shall be five, of whom at least one shall be a member of Dáil Éireann and one a member of Seanad Éireann.
- (c) The Joint Committee shall have the powers defined in Standing Order 65(1) to (9) inclusive.
- (2) The Chairman of the Joint Committee shall be a member of Dáil Éireann.