



drug misuse

SCOTTISH ADVISORY COMMITTEE ON DRUG MISUSE

Psychostimulant Working Group Report

Substance Misuse Division

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MINISTERIAL FOREWORD

The problem of psychostimulant use in the UK as a whole is of concern to us all. In Scotland, current levels of use are still low, but growing. The Scottish Executive recognises that there is no room for complacency, particularly in relation to the use of cocaine and crack. It is important, therefore, that we are fully aware of the issues around the use of these and other psychostimulant drugs in Scotland, so that we can provide a distinctive Scottish approach to tackling the problem. This will enable us to more effectively strengthen our enforcement effort, enhance our prevention activities and ensure that our treatment and rehabilitation services are sensitive to the needs of those who seek help to overcome their psychostimulant drug use.

This report is therefore very timely. As Chairman of the Scottish Advisory Committee on Drug Misuse, I thank members of the Working Group for their hard work in preparing the report and for highlighting issues for our attention. The Scottish Executive fully supports and accepts the recommendations of the Working Group. We are already investing record funding to tackle the drugs problem. We will look carefully at the implications of this report for future provision.

I urge Drug Action Teams and those agencies engaged in tackling drug misuse at local level to fully consider the contents of this report and to implement the recommendations relevant to their areas of responsibility. More practical guidance for those involved in the planning and provision of drugs services will issue shortly from the Effective Interventions Unit.

A handwritten signature in black ink, appearing to read 'R. Simpson'.

DR RICHARD SIMPSON MSP
Deputy Minister for Justice

1.1 Until recently the known prevalence of psychostimulant use in Scotland has been at a low level compared to other parts of the United Kingdom. However, by 2001 there were increasing anecdotal reports from services which suggested that the use of this group of drugs was on the increase and that current opiate based services were unable to offer an appropriate level of support nor be attractive to potential clients.

1.2 The Scottish Advisory Committee on Drug Misuse (SACDM) agreed, therefore, at its Away Day in June 2001, to set up a Working Group to review the extent of psychostimulant use in Scotland, review current service provision and make recommendations for the future. This is the report of the Working Group, presented to SACDM on 10 June 2002. The work of the Group will also inform the integrated care report to be published by the Scottish Executive's Effective Interventions Unit later this year.

THE WORKING GROUP AND SCOPE OF REPORT

Remit

1.3 The remit of the Psychostimulants Working Group (PSWG), agreed at its first meeting, was:

to identify the issues around cocaine, crack and amphetamine use in Scotland; to look at the available evidence for best practice in prevention and service provision; and to make recommendations to the SACDM with a view to the Scottish Executive issuing guidance to service providers, users and interested individuals.

Membership

1.4 Membership of the group covered a range of professional expertise and reflected experience across Scotland. The group met on four occasions and took oral and written evidence from a number of experts with a particular interest in this group of drugs. A list of members can be found at the end of this Report.

Scope of report

1.5 The report is based on:

- a detailed scrutiny of the relevant scientific literature, including a review undertaken by the Scottish Executive's Effective Interventions Unit (EIU);
- the results of a pan-European study to evaluate the current use of psychostimulants - the Study by the Federation of European Professional Associations Working into the Field of Drug Abuse (ERIT);
- oral and written evidence; and
- a short piece of commissioned, peer research to elicit psychostimulant users' views and experiences with existing services.

WHAT DO WE MEAN BY PSYCHOSTIMULANTS?

1.6 Psychostimulants are chemical substances that excite the central nervous system. There are a number of naturally occurring psychostimulants, such as caffeine, nicotine, ephedrine and cocaine. There are also synthetic stimulants, which are predominantly amphetamines. They have been used as appetite suppressants and have been investigated for their potential to decrease fatigue and increase work output.

1.7 Psychostimulants have the potential to produce feelings of well being and alertness. They are habit forming and can cause dependence. There is evidence to suggest that abrupt discontinuation can result in a characteristic withdrawal syndrome.

1.8 The psychostimulants covered by this report are:

Amphetamines – a group of chemically related synthetic stimulant drugs generally produced illicitly or as tablets legally produced by pharmaceutical firms and subsequently diverted onto the illicit market.

Cocaine – cocaine hydrochloride and cocaine alkaloid which is known as ‘freebase’ or ‘crack’. (See Glossary)

1.9 The spelling of many drugs has recently been changed by international agreement. ‘Amphetamine’ is the old British Approved Name spelling and is used throughout this report. ‘Amfetamine’ is the new International Naming Nomenclature spelling.

THE LEGAL POSITION

1.10 The most important statute relating to drugs in the UK is the Misuse of Drugs Act 1971 which aims to prevent the non-medical use of certain drugs. The Act lists the drugs that are subject to control and classifies them in three categories, Classes A, B and C. Penalties for offences involving controlled drugs depend on this classification, with Class A drugs carrying the greatest penalties. The Act distinguishes, in terms of penalties that can be imposed, between crimes of possession and drug trafficking, the latter attracting the higher sanctions. Class A psychostimulants include cocaine, ecstasy and amphetamines that are prepared for injection; Class B includes the oral forms of amphetamine, dexamphetamine, methylamphetamine and methylphenidate; Class C stimulants include benzphetamine, pemoline, and phentermine. Stimulants therefore fall into all 3 categories under the Act.

1.11 The legislative framework for controlled drugs is a matter that is reserved to Westminster.

Treatment of Attention Deficit Hyperactivity Disorder and Hyperkinetic Disorder

1.12 The use of psychostimulants to treat a number of medical conditions remains controversial and there are concerns about prescribing such medication to children as well as anxieties surrounding the potential for prescription misuse and the inappropriate diversion of these psychostimulants onto the black market. Two psychostimulants available for prescription in the UK are methylphenidate and dexamphetamine. Both are licensed for the treatment of children with Attention Deficit Hyperactivity Disorder (ADHD) and Hyperkinetic Disorder (HKD). The Scottish Intercollegiate Guidance Network recommends

that the initiation of pharmacological treatment for children with ADHD and HKD should only be undertaken by a specialist in either child or adolescent psychiatry or paediatrics who has training in the use and monitoring of psychotropic medicines. The Working Group endorses and commends this recommendation.

1.13 Further information on the drugs, the main routes of use and the effects of use can be found in [Chapter 5](#).

SUMMARY

EXTENT OF THE PROBLEM

- At present there are limited data available on the scale of psychostimulant use in Scotland, particularly among those users not seeking treatment.
- Trends in cocaine use in Scottish data are less consistent than those from England which show a clear increase in the use of cocaine in the second half of the 1990s. In Scotland there does appear to be an increase in the use of cocaine, but at a lower level.
- Increased cocaine use reported in the Health Education Population Survey (HEPS) and an increase in the number of new referrals to the Scottish Drug Misuse Database using stimulants.
- The demographics of those reporting cocaine use alone are markedly different from those who use opiates either as a primary or secondary drug.
- The figures for Aberdeen and surrounding area are particularly high and reflect an established crack/cocaine market in the area.
- COCA Scotland note changing habits and use of crack/cocaine from area to area and scene to scene within the same city/town with injecting of crack/cocaine more prevalent in the north of Scotland than elsewhere.
- Police reports of increased seizures of cocaine may reflect a real increase in availability.

PREVENTION

- The 'all drugs' approach, i.e. all drugs are harmful and use of them should be discouraged, of the Scottish Executive's communications strategy is appropriate - singling out stimulants for separate treatment at the national level would not be helpful (in part because there is a danger of encouraging use).
- More specific information on the dangers of using amphetamines, cocaine and crack cocaine is appropriate at local level.
- Specifically targeted information should be available to drug services, health professionals, service users, needle exchanges, employers, the police and prison service.
- Similar information should be available in settings where users who are not currently seeking treatment are likely to be found, such as pubs and clubs.

ADVERSE EFFECTS OF USE

Health problems

- Dependence on psychostimulants is associated with general health problems such as reduced appetite and poor nutrition resulting in increased susceptibility to illness and infection.
- Some of the adverse physical effects of psychostimulant abuse are related to the route by which they are taken.
- Injecting psychostimulants carries additional risks including abscesses, septicaemia and chronic infection of the heart lining and valves. Sharing needles carries the risks of hepatitis, HIV and AIDS.

- Psychiatric problems can occur with psychostimulant use, especially with chronic use and during “binges”.
- Neuro-psychological tests on chronic psychostimulant users show cognitive impairments, some of which may be persistent, that may adversely affect the ability to make decisions and thus the outcome of treatment.

Amphetamines

- Amphetamines are a group of chemically related synthetic stimulants that are generally produced illicitly. Some may be pharmaceutical products that are diverted onto the illicit market.
- The commonest types of amphetamines tend to be swallowed, injected or snorted. A variety of amphetamine known as “ice” can be smoked, though this is still currently rare in Scotland.
- Amphetamine abuse can result in high blood pressure, abnormal heart rhythms, stroke and uncontrolled rise of the body temperature, all of which may be fatal.
- Anxiety during use and depressive symptoms after using are common.
- Amphetamine psychosis may develop with chronic or high dose consumption of amphetamines.
- Maternal use during pregnancy may harm the fetus but the research evidence is limited.

Cocaine

- There are two basic types of cocaine: cocaine hydrochloride which is snorted or injected and the alkaloid of cocaine (freebase or crack) which is usually smoked.
- Cocaine use can be linked to virtually every type of heart disease. Death or disability may result from abnormal heart rhythms, heart attack or high blood pressure causing a stroke. With chronic use the cardiovascular system is prematurely aged.
- Cocaine may cause seizures or unmask epilepsy and can cause an uncontrolled rise in temperature that may be fatal.
- Snorting of cocaine can result in nose bleeds, loss of sense of smell, and nasal septum perforation. Smoking can cause a variety of respiratory problems including respiratory failure and “crack lung”.
- The injecting of heroin together with cocaine (“speedballing” or “snowballing”) is a highly dangerous practice that is becoming more prevalent in Scotland.
- Cocaine is often taken with alcohol forming a third substance, cocaethylene, which has longer lasting effects and is more toxic, especially to the cardiovascular system, than cocaine alone.
- Psychiatric problems include anxiety and panic attacks. These may persist even after stopping cocaine use. Depressive symptoms are common following stopping the drug and may be persistent and severe enough to lead to suicide.
- With heavy or chronic use a psychosis may develop with paranoid features, auditory hallucinations, anxiety and agitation. The individual may become confused (excited delirium), violent and require detention for treatment. This usually resolves over a few days but may be more persistent.
- Maternal use during the pregnancy can cause premature delivery, low birth-weight, post-natal withdrawal symptoms and cognitive and behavioural disorders in later life.

PLANNING SERVICES

- There is limited evidence about how drug services should be designed to meet the needs of stimulant users, and what there is comes from England and the USA.
- Most stimulant users perceive drug services, as they are currently configured, to be the preserve of opiate users.
- Psychostimulant users are not a homogeneous group who also use other drugs/alcohol—some are opiate users who also use psychostimulants; others are primary stimulants users; a few only use stimulants.

CONCLUSIONS

- Whilst there is no current or anticipated epidemic of stimulant use in Scotland, there are indications that the use of cocaine and crack cocaine has increased recently and is expected to continue to increase.
- The message of prevention at the national level should continue to be that all drugs are harmful. To be effective with stimulant users, local communication strategies, and other prevention work aimed at discouraging stimulant use, need to take account of the fact that stimulant users may be difficult to reach and have a very different profile from opiate users.
- There is an urgent need for information on the dangers of crack/cocaine use for service providers and users in Scotland. A range of channels and techniques need to be used to reach the different target audiences.
- The health consequences of psychostimulant use should not be underestimated. There are serious physical and psychiatric problems associated with the use of these drugs that may be compounded by the use of alcohol or opiates at the same time.
- Information on stimulant use, its consequences and the range of possible treatment options is currently very limited in the training of health care (and other) professionals.
- There is a need for services to be more responsive and accessible to stimulant users across Scotland, although there is considerable variation across the country and specific stimulant services are urgently needed in cocaine and crack cocaine hot spots
- Whether existing services should adapt or new services be set up would be a matter for local decision. Resources would need to be redirected to allow this.
- There is already a significant level of unmet need among stimulant users that should be addressed without delay. The number of individuals who seek help because of cocaine use is small, but there is undoubtedly need for an increased number of treatment places available to stimulant users.
- To be accessible to stimulant users, services and interventions will need to be tailored to their specific needs, profile and characteristics, which are very different from those of opiate users.
- Continuous monitoring of stimulant use across and within Scotland is important to ensure that services are able to meet the demands of this group. Experiences from elsewhere suggest that this may include local needs assessment exercises.
- Consideration needs to be given as to whether new sources of data may be necessary, given the number of users who do not go to treatment services.
- There is a need for further evaluation and research, at least at a UK level, to examine the effectiveness of services models and specific interventions to address the needs of

stimulant users in Scotland and elsewhere. Evidence of the effectiveness is currently limited.

- As part of a broad strategy to address stimulant use, it is important for the police to take steps to curtail availability and to increase enforcement.

RECOMMENDATIONS

PREVENTION

1. The Scottish Executive should make available without delay specifically targeted information on the dangers of crack/cocaine use to drug services, health professionals, service users, needle exchanges, employers, the police and prison service, using information resources already available from the Piper and Blenheim Projects, COCA and Mainliners.
2. The Scottish Executive should work with Drug Action Teams (DATs) to develop local communication strategies covering psychostimulants that tailor health messages to different audiences and use different methods and general outlets such as libraries, sports centres/gyms and websites.
3. Information made available through local communication strategies for users about the damaging health consequences of psychostimulant use should stress the risks associated with the route by which stimulants are taken and the psychiatric problems associated with bingeing.
4. Local information strategies should include information for users on the risks of contracting blood borne viruses associated with the injection of crack and cocaine and on the dangers of contracting sexually transmitted diseases as a result of risk-taking sexual activity, so that they can make informed decisions and reduce associated harm.
5. The Lord Advocate's guidance, which is currently under review, should ensure that needle exchanges are able to supply enough sets of injecting equipment to meet the increased need of crack and cocaine injectors.
6. All agencies involved in drugs education should highlight the dangers of cocaine and crack cocaine use.
7. Employers should review their workplace drug policies to include reference to psychostimulant use.

AVAILABILITY

8. The Scottish Drug Enforcement Agency should take action without delay to make key messages from its recent unpublished report more widely available and advise on action to be taken by the police and other agencies to reduce availability of psychostimulants in Scotland and to strengthen enforcement.
9. The Scottish Executive should consider and act on the outcomes of a Customs and Excise Research project that will quantify recreational drug misuse, particularly crack cocaine, across the UK.
10. Each local health care co-operative should undertake a survey to assess the impact of the SIGN Guideline No 52 on the primary care management of attention deficit disorder and hyperkinetic disorder.

TREATMENT

11. Service planners and providers should ensure that treatment interventions are designed for stimulant users based on existing evidence of their effectiveness.
12. Service planners must consider increasing substantially the number of treatment places for both cocaine and crack users.
13. Opiate services should also take account of their clients' cocaine and crack use.
14. The Scottish Executive should review the Models of Care for stimulant users being developed in England by the National Treatment Agency with a view to developing similar standards for use in Scotland.
15. The Effective Interventions Unit (EIU) should include in its forthcoming report on the integrated care of drug users a section on access to treatment for psychostimulant users.
16. The Scottish Prison Service should give consideration to developing the COCA advice to prison workers to reflect Scottish conditions.
17. Maternity services should be aware of the possible adverse effects of maternal stimulant use on the fetus and new-born.

PLANNING SERVICES

18. Drug Action Teams (DATs) across Scotland, and their constituent agencies, should establish and develop drug services that are geared to meet the needs of an existing and emerging (and potentially large) group of cocaine and crack users
19. Cocaine 'hot spots' such as Glasgow, Aberdeen and Edinburgh should have basic stimulant drug services in place.
20. DATs should commission local needs assessments before services are planned.
21. In planning services for psychostimulant users DATs and agencies should address the needs of four categories of users:- youthful experimenters; regular stimulants users; problematic stimulant users; and opiate/stimulant co-users.
22. DATs and service providers must recognise the disinclination of problem stimulant users to use services and take measures to overcome this.
23. The EIU should provide, as soon as possible this year, a guide on psychostimulants for (DATs), service planners and providers drawing on the findings from this report. This should include information about the range of health consequences of stimulant use and their seriousness and the characteristics of some stimulant users. (Draft is at Annex G)
24. Criminal justice initiatives such as Drug Treatment and Testing Orders and Drug Courts should take steps to address the treatment needs of psychostimulant users and Arrest Referral Schemes should be able to refer stimulant users to appropriate services.

TRAINING

- 25 NHS Education should ensure that substance misuse is included in the curriculum for all health care professionals as a matter of urgency.
- 26 The Scottish Executive should explore with relevant professional bodies the inclusion of substance misuse in the undergraduate curricula for doctors, pharmacists and nurses as a matter of urgency.
- 27 The Scottish Executive should include in its review of initial teacher education the need to incorporate stimulants as part of health education.
28. The Scottish Executive should bring forward proposals to enhance professional social work education by ensuring that stimulant use is included in substance misuse training.
- 29 The Scottish Social Services Council should include substance misuse in its curricula and in its programme of professional development as a matter of urgency.
30. Scottish Training on Drugs and Alcohol (STRADA) should develop a module about psychostimulant use for specialist drugs workers and health professionals.
- 31 STRADA should develop training modules on psychostimulant use which should be available to front line staff in the police, prison service, community education, teaching, housing, employment services, social work etc.

RESEARCH AND EVALUATION

- 32 Service commissioners should ensure that services designed to meet the needs of psychostimulant users are rigorously evaluated. This may include both process (to examine how services are best designed and delivered) and outcome evaluations (to assess the impact of the service). Support for such evaluations in Scotland should be a commitment for future work of the Scottish Executive Drugs Misuse Research Programme.
- 33 Service providers should ensure that approaches to treatment (pharmacological / psychological and psychosocial) are rigorously evaluated to help build on the existing evidence base and inform the future development of services at national and local levels.
- 34 The EIU should, as soon as possible, disseminate widely current and future research on psychostimulants, including the aforementioned guide for DATs which draws on the key findings of the this report.
- 35 The EIU should watch for relevant research evidence from other countries.

STATISTICS

36. The Information and Statistics Division of the Common Services Agency (ISD) should make available data that will help with local needs assessment.
- 37 ISD should consider whether there is a need for analysis linked to DAT needs assessment work.

38 ISD should continue to monitor trends in use of psychostimulants.

39 ISD should consider developing some more detailed local monitoring in areas of high use of psychostimulants.

40. ISD should consult a range of additional data sources that could provide supplementary evidence of psychostimulant use, such as NHS data on psychiatric morbidity; A&E admissions etc.

RESOURCE IMPLICATIONS

41 Resources should be made available by the Executive, NHS Boards and local authorities to:-

- improve existing service to address the needs of psychostimulant users;
- introduce specific services targeted at regular and problematic psychostimulant users;
- produce and disseminate information as part of the communication strategy;
- undertake research and evaluate new and existing service provision; and to
- improve data collection to include specific questions on psychostimulant use.

CHAPTER 3: THE EXTENT OF THE PROBLEM

3.1 In England there is clear evidence from survey and drug treatment data of an increase in the use of cocaine in the second half of the 1990s. The British Crime Survey (BCS) found that the proportion of young people aged 16-29 years reporting recent cocaine use in the last 12 months rose from 1% to 5% between 1996 and 2000. In the same time period there was a small fall in reported use of amphetamine. The proportion of new referrals to English drug treatment services reporting any cocaine use also rose from 7% to 24% between 1998 and 2001, while the proportion reporting cocaine as their main drug of use rose from 3% to 8%.

3.2 Information about the use of psychostimulants in Scotland comes from a variety of sources including:

- population surveys of self-reported drug use;
- drug seizures data from police and customs;
- drug treatment data from the drug misuse databases.

Trends in the Scottish data are less marked and less consistent than in the English data but used in combination the different data sources available allow conclusions to be drawn both about the scale of use and the profile of cocaine users in Scotland.

Survey data

3.3 The Scottish Crime Survey (SCS) found that cocaine use in the last 12 months amongst 16-29 year olds fell slightly from 2.9% in 1996 to 2.5% in 2000. In the 2000 SCS recent cocaine use was most common amongst men and women aged 20 to 24 years with 5.4% and 3.8% respectively reporting use in the last 12 months. Interestingly while lifetime use of cocaine was more common amongst men, levels of recent use were similar in men and women across all age groups. Between 1996 and 2000 use of amphetamine amongst 16 to 29 year olds fell sharply from 9.2% to 2.8%. The fall in amphetamine use amongst young adults was also evident in data from the Health Education Population Survey (HEPS), a survey commissioned by the Health Education Board for Scotland (HEBS). However, the HEPS survey found that recent use of cocaine amongst respondents aged 16-34 years increased from 0.9% to 4.1% between 1996 and 2001. The smaller sample size used in the HEPS survey suggests that we should be cautious about drawing firm conclusions from these data, nevertheless the findings are consistent with a marked increase in cocaine seizures reported by police forces in Scotland

Drug seizure data

3.4 Between 1997 and 2001 cocaine seizures in Scotland rose from less than 0.25kgs to 25kgs. The sharp increase suggests [that this reflects] a real increase in the availability of cocaine in Scotland rather than changes in police operational policy. There have also been a small number of seizures of 'crack cocaine'.

3.5 Cocaine seizures in Strathclyde account for a large proportion of the total seizures for Scotland as a whole. Significant quantities of cocaine have also been seized in Lothian & Borders, Fife and Grampian police force areas ([Annex A](#)). In contrast seizures of amphetamine have decreased across Scotland, particularly since 2000. For example, amphetamine seizures by Lothian and Borders police fell by 81% in 2001 and in some areas it is believed that supplies of amphetamine are now being replaced by cocaine.

3.6 Available intelligence indicates that Liverpool, London, the West Midlands and direct importation from overseas are major routes of cocaine into Scotland. The primary means for exporting cocaine from South America to Europe is by sea and it is estimated that between 25 and 40 tonnes are imported into the UK per year via this route. Cocaine hydrochloride is the primary form in which cocaine is imported and it is believed that the majority of crack cocaine in Scotland is prepared in the UK from imported cocaine hydrochloride. The amount of cocaine smuggled by air, particularly from Jamaica, to the UK by drug couriers has increased since September 2001.

Scottish Drug Misuse Database data

3.7 The increase in availability of cocaine is reflected in the numbers of new referrals to the Scottish Drug Misuse Database (SDMD) who mention cocaine use (including crack cocaine). The proportion of individuals reporting any use of cocaine has risen steadily from 2% in 1996/97 to 5% in 2000/01. However, the proportion reporting cocaine as their main drug reached only 1% in 2000/01. At present the number of individuals who seek help because of cocaine use is extremely small. It should be borne in mind of course that drug treatment services have been set up almost exclusively to cater for opiate users who have quite different profiles and service needs.

3.8 From the 2000/01 SDMD data it can be seen that the demographic profile of drug users reporting cocaine use alone is markedly different from those who are also using opiates either as a primary or secondary drug. The cocaine only group were more likely to be employed and to be living with a partner than cocaine users who also used other drugs. As a group, with the exception of one case, they were all male.

3.9 The SDMD data also suggest marked geographical variation in the extent of use of both cocaine and crack cocaine. The following table gives a more detailed breakdown of SDMD data by area between 1996 and 2001.

New Referrals to Drug Treatment Services with Mention of Use of Cocaine or 'Crack' Cocaine

		1996	1997	1998	1999	2000	2001
Aberdeen City	Cocaine	20	19	29	46	42	42
	Crack Cocaine	1	3	9	44	41	61
Aberdeenshire	Cocaine	8	1	6	16	15	12
	Crack Cocaine	2	1	3	15	21	38
City of Glasgow	Cocaine	30	29	34	38	94	151
	Crack Cocaine	5	8	3	9	22	15
City of Edinburgh	Cocaine	16	13	21	31	43	58
	Crack Cocaine		2	2	4	7	16
Dundee City	Cocaine	1	3	6	8	13	10
	Crack Cocaine	-	-	-	-	-	1

Source: Scottish Drug Misuse Database

3.10 The level of use of 'crack' cocaine in Aberdeen and the surrounding area is particularly high. Police intelligence suggests that this reflects an established crack cocaine market in the area. Police intelligence also suggests that prostitutes from Wolverhampton in the West Midlands have established themselves in Aberdeen and may have stimulated demand. In Edinburgh, prostitutes have been known to sell crack cocaine to heroin addicts. There has been no significant incidence of crack cocaine in the 'red light' district of Glasgow. That may be because local crack users buy cocaine hydrochloride and self-manufacture crack. This is the preferred method in the north of the city. (See unpublished report *The Impact of Cocaine and Crack Cocaine Use in Scotland - Strategic Assessment* by Scottish Drug Enforcement Agency and the national Criminal Intelligence Service, [page 16](#)).

Additional Information

3.11 There are other sources of information that provide a more up to date picture of the use of psychostimulants than is available from routine monitoring data. However, some provide only anecdotal evidence and therefore should be interpreted with caution.

3.12 Preliminary results from the Drug Outcome Research In Scotland (DORIS) study point to a relatively large minority of treatment-seeking drug users using either crack or cocaine in the previous 3 months. However, this group considered their crack or cocaine use as less problematic than their other drug use (predominately opiates). It should be noted that these are early results from this study and may not be based on a representative sample.

3.13 In a short survey of needle exchange attenders in Aberdeen, 62 out of 337 (18%) reported using stimulants. The majority of these clients were males aged 25-30 and used crack regularly - most by smoking though about a quarter injected. Heroin was the primary drug of use amongst those surveyed.

3.14 The Conference of Cocaine and Crack (COCA) is a national organisation that supports agencies which work with people with crack and cocaine addiction. COCA Scotland provided the Working Group with anecdotal evidence of the pattern of stimulant use across Scotland. In the north, agencies reported that cocaine use had increased in recent months. Speed/snowball injecting was reported to be common in both Aberdeen and Inverness. COCA Scotland report some doubt about the "Wolverhampton connection" with Aberdeen. In the East, agencies reported that cocaine has been present for some years. More crack is now being seen. This is mainly produced by the ammonia wash method as extraction with sodium bicarbonate is considered to be wasteful. Smoking is more common than injecting. In the Borders, there is a history of amphetamine use. There are no reports of cocaine or crack being available in any quantity. What is available appears to originate from Edinburgh or Glasgow.

3.15 Figures from ISD for Glasgow and West of Scotland show a rise between 1996 and 2001 in the numbers using:

- cocaine as the main drug from 20 to 63
- crack as the main drug from 3 to 4
- any use of cocaine from 62 to 257
- any use of crack from 7 to 32.

3.16 Because ISD statistics are for new presentations to services (or re referrals after an interval of six months or more), local addiction service workers in Glasgow, East Renfrewshire and Renfrewshire were contacted to ascertain a broader picture of the levels of use among existing service users. Across the area workers reported a significant increase in crack use among known opiate using clients. The crack use was generally recreational or occasional and was not seen as problematic by the clients. Workers estimated that 20% to 40% of their existing client caseload were reporting crack use. There were some differences in the profile of users between areas.

- Barrhead - mainly young males purchasing crack rocks at £15-£20 to smoke.
- Paisley - widespread use across age groups, higher levels of use among sex workers and mostly home produced crack (cocaine hydrochloride @ £40 per gram). Some freebase use, always home made. No reports of intravenous use.
- Renfrew - widespread across age groups, high levels of use among sex workers and more often purchased as rocks. Some intravenous use as 'snowballs'.
- North Glasgow - mainly crack bought as rocks, mainly smoked.
- East Glasgow - very widespread use, home made and ready rocked, (£40 per gram cocaine, £10-£15 per rock) IV 'snowballing' fairly common. More freebase than elsewhere.
- South Glasgow - as for North Glasgow, very occasional intravenous use.
- West Glasgow - as for South Glasgow.

3.17 The above evidence is of course anecdotal, however workers are consistently reporting increasing numbers of recreational crack users. These figures will not be recorded by ISD as they are from existing service users. The introduction of re-reporting may overcome this problem for those stimulant users already in touch with opiate-based services. The introduction of re-reporting may overcome this problem for those stimulant clients already in touch with opiate based services. Workers stated that although clients often report crack use when directly asked, they often failed to mention it during a general enquiry because it is not perceived as problematic. Presentations at dual diagnosis clinics were also increasingly reporting crack and cocaine use. The Glasgow Drugs Court Team treatment providers, Glasgow Drug Problem Service (GDPS), routinely screen urine samples for cocaine - over 50% are positive. A more in-depth mapping exercise of cocaine and crack use in Scotland is about to be undertaken by COCA. We await the results with interest.

3.18 The cross-national **ERIT** survey on psychostimulant use aimed to assess the current national situation and any changes in psychostimulant use. Three extensive questionnaires were circulated to key practitioners and policy makers in six European countries. The recipients of the questionnaires were asked to include the views of users in their responses. Fifteen organisations in Scotland were contacted including Drugs Action Aberdeen, Glasgow City Council, and CREW 2000 in Edinburgh. In addition the ERIT researcher visited Scotland and interviewed representatives on the Scottish Executive, Scottish Drugs Forum, Greater Glasgow NHS Board and Strathclyde Police.

3.19 Apart from identifying a widespread use of ecstasy and a few pockets of amphetamine use, the ERIT study appeared to demonstrate that the use of other psychostimulants such as crack and cocaine is at a low but emerging level in Scotland. This finding was in sharp contrast to the findings from the other participating countries where there is already widespread use of both crack and cocaine. Although the ERIT study provided evidence of low crack and cocaine use in Scotland, there was some indication of an increase in use in the

previous twelve months and some evidence that crack/cocaine was being used by primary opiate users to aid functioning and conversely that ecstasy users may be using opiates such as heroin to come down from a “high”. In addition the ERIT study found that both local and national strategies in Scotland were focused on opiate use, service provision was predominately targeted at opiate users and stimulant users felt marginalised and reluctant to access existing services.

Conclusion

3.20 In combination, the available monitoring data from population surveys, drug treatment and drug seizure data provide some evidence of an increase in the use of cocaine and 'crack cocaine' in Scotland over the last five years. Concurrent with this there appears to have been a decline both in the availability and recent use of amphetamine. Nevertheless, in comparison with England the level of use of cocaine both in general and drug treatment populations appears to be lower. More recent anecdotal and provisional data from a number of surveys provide further supporting evidence of an emerging problem with cocaine and 'crack cocaine'. If the availability of cocaine continues to increase then it is anticipated that the number of Scots in need of drug treatment for cocaine dependence will also increase sharply.

CHAPTER 4: PREVENTION

4.1 The assessment by the Scottish Drug Enforcement Agency (SDEA) and the National Criminal Intelligence Service (NCIS) of the availability of cocaine and crack cocaine in Scotland and an analysis of the data sources relating to stimulant use have confirmed that there is a growing availability of and demand for these substances in Scotland. Whilst there is no indication that an epidemic is likely, the Working Group was concerned about the real possibility that more people in Scotland will be drawn into using stimulants. It was also concerned that there appears to be significant unmet need for services among existing stimulant users.

4.2 In this situation, it is important that more should be done by the police and Customs and Excise to control supply. We are aware that Customs and Excise are commissioning research in this area and of the findings of the SDEA assessment. However the Working Group feels that the SDEA needs to recommend specific action to the police to reduce supply and strengthen enforcement.

4.3 It is also clear that prevention is a key issue to be addressed particularly with young people. Information needs to be available to help young people to decide against using drugs. The Working Group accepted the premise, which was highlighted in the House of Commons Home Affairs Committee, that all drugs are harmful and should be discouraged.

4.4 The Working Group welcomed the approach of the Scottish Executive's drugs communications strategy which was launched earlier this year, in particular the distinction it makes between an "all drugs" approach at national level and targeting specific groups with explicit information at local level. However, the Group was concerned that any communication strategy for stimulants should inform people of the dangers of use and avoid encouraging use. It is important that the work undertaken by the Executive with local media should highlight where help and advice for stimulant users can be obtained. It is also important that DATs, and other players working to develop local communications strategies, take into account the very different profile and needs of stimulant users as distinct from opiate users. For instance, evidence from the Piper Project suggests that 'word of mouth' does not really work with stimulant users who are generally more isolated from their peers than people who use opiates; consequently they are more likely to pick up information from general venues such as libraries or sports centres.

4.5 There is clearly a need for specific information on the dangers of using amphetamines, cocaine and crack cocaine at local level. Specific drugs literature can be produced linked to the *Know the Score* campaign to meet local needs. This proposal sits well with the Scottish Executive communication strategy's focus on promoting harm reduction at local level. DATs need to develop messages appropriate to the situation in their areas, taking account of the marked regional variations both in availability and in modes of use. They need to identify new more general information outlets that will reach stimulant users. Work needs to be done to tailor health messages to different audiences by using different approaches. Consideration should be given to the use of websites and locations that are accessible to the general public such as libraries and sports centres etc.

4.6 Accurate information on the dangers of crack/cocaine use, similar to that produced by COCA UK, and the Blenheim Project must be made available for use in Scotland. Specifically targeted information should be available to drug services, health professionals, service users, needle exchanges, employers, the police and prison service. Information resources already available from the Piper Project, COCA, the Blenheim Project and Mainliners should be examined with a view to developing similar resources for use in Scotland.

4.7 In addition stimulant users need to be given information that enables them to make informed decisions and reduce associated harm. They need in particular to be informed on the risks of contracting sexually transmitted diseases as a result of risk taking sexual activity and of contracting blood borne viruses, the latter is particularly associated with the injection of crack and cocaine. The Lord Advocate's guidance on the number of sets of injecting equipment that can be supplied on one occasion needs urgent review. Needle exchanges must be able to supply enough sets of equipment to meet the increased need of crack and cocaine injectors.

CHAPTER 5: MODES AND ADVERSE EFFECTS OF USE

5.1 It is clear from the evidence available to the Working Group from medical literature, service providers and users that there is a wide range of potential physical and mental health problems resulting from psychostimulant use (see table in [Annex B](#)). Many of these are serious and potentially fatal.

5.2 General health problems are associated with dependence on psychostimulants partly because nutrition is impaired resulting in increased susceptibility to illness and infection. In addition, heavy users show progressive social and occupational deterioration. The health consequences of psychostimulant use are further compounded by the abuse of other substances such as alcohol and heroin.

5.3 Neuro-psychological tests on chronic psychostimulant users show cognitive impairments that may impair the ability to make decisions and so adversely affect the outcome of treatment.

AMPHETAMINES

Modes of Use

5.4 Amphetamines are a group chemically related synthetic stimulant drugs generally produced illicitly or as tablets legally produced by pharmaceutical firms and subsequently diverted onto the illicit market. With a reduced availability of pharmaceutically produced amphetamine, it is now the illicitly produced form, of variable and often low purity, which is primarily available and abused. There are three basic types of amphetamines; laevoamphetamine, dextroamphetamine and methylamphetamine. The most widely available form on the black market is a white crystalline powder containing both laevoamphetamine and dextroamphetamine in equal proportions. It is commonly called as amp, speed, whizz or sulph.

5.5 The main routes of use are oral and intravenous although the drug can be taken nasally or, as an amphetamine base, smoked. The oral route is the commonest for both pharmaceutical and illicit amphetamines. The amphetamine sulphate powder is usually taken wrapped in a cigarette paper (called a “bomb”) or by licking it off a finger dabbed into a bag of powder (“dabbing”). For injection, the amphetamine powder is dissolved in water and filtered through cotton wool or a cigarette filter to remove the larger particles prior to intravenous injection. The onset of action is much faster when injected than ingested (the “rush”). Nasal inhalation or “snorting” involves chopping the amphetamine sulphate into a fine powder and sniffing it through the nose. The onset of action is between that of injecting and swallowing. While methylamphetamine hydrochloride can be taken by the above routes, crystalline methylamphetamine base (“ice”) can be smoked or injected. When smoked, it gives a “rush” similar to that of cocaine but with a longer duration of the euphoric state. Its use is currently relatively rare in Scotland.

5.6 The frequency of the drug use varies considerably. “Recreational” use is relatively common with individuals taking the drug only occasionally (often “snorting”) or regularly but not daily (more often taking it orally). This is often in association with social activities and includes weekend use. Heavy and intermittent use or bingeing also occurs in amphetamine use, lasting hours or days, ending with the “crash” and subsequent withdrawal

phase. At the severe end of the spectrum is the daily dependent user who usually takes the drug orally or intravenously.

5.7 As tolerance to the effects of amphetamine develops the dosage taken increases to achieve the same effect. There is some evidence to suggest that stimulant users may take sedative drugs such as diazepam or heroin to counter the stimulant effects of amphetamine at the end of a session of using the drug.

Physical health problems associated with amphetamine misuse

5.8 Amphetamines can cause a variety of cardiovascular problems. These include rapid heart rate, irregular heartbeat, increased blood pressure, and irreversible, stroke-producing damage to small blood vessels in the brain. Hyperthermia (elevated body temperature) and convulsions occur with high doses of amphetamine and can result in death. With an elevation in the blood pressure a stroke, which may be fatal or leave permanent disability, may occur.

5.9 Intravenous use can result in cellulitis, abscesses, septicaemia, arterial thrombosis, endocarditis (a chronic infection of the inner lining of the heart and heart valves), renal infarction, and thrombophlebitis. Sharing of injecting equipment raises the risks of contracting hepatitis B and C, HIV and ultimately AIDS.

5.10 Acute lead poisoning is another potential risk for amphetamine users. A common method of illegal amphetamine production uses lead acetate as a reagent. Production errors may therefore result in amphetamine contaminated with lead.

Psychiatric problems associated with amphetamine misuse

5.11 Episodes of anxiety and panic are common with repeated amphetamine abuse. Following a binge on amphetamines the individual enters the “crash” phase with depressive symptoms, agitation, anxiety, low energy and craving. Insomnia is prominent early on and may result in the individual using a sedative drug like alcohol, benzodiazepines or opiates to “come down” and this may be followed by a period of hypersomnia.

5.12 With chronic or high dose consumption of amphetamines, paranoid ideation may develop. An amphetamine psychosis may develop as the paranoid ideation becomes delusional in intensity and the individual believes themselves to be persecuted. Hyper-reactivity to stimuli may develop as may hallucinations. The individual may develop stereotyped behavioural patterns involving repetitive meaningless motor activities. Ultimately confusion, severe anxiety with a fugue like state may develop and sudden acts of violence may occur. Psychotic symptoms usually resolve over a few days following stopping the drug use, but may be more persistent.

5.13 Heavy chronic users also often show progressive social and occupational deterioration.

COCAINE

Modes of Use

5.14 Pharmaceutically produced cocaine is still used in medical practice to reduce local blood flow in some surgical interventions. Such use is, however, rare and the amounts produced and thus available for diversion are so small that this source of the pure drug can be effectively ignored. Abused cocaine is thus acquired from illicit manufactured sources.

5.15 There are two basic types of cocaine. Cocaine hydrochloride and cocaine alkaloid (“freebase” or “crack”). These varieties differ in their chemical structure and properties facilitating different modes of use. Cocaine hydrochloride is a white powder which is water soluble and can be absorbed through the mucous membranes. This variety is broken down in the body to a significant extent when swallowed and is largely destroyed by burning (~1% surviving). It is thus taken nasally or intravenously. Cocaine alkaloid is not readily soluble in the mucous membranes or blood but has a low melting point and is easily volatilised with lesser destruction (~80% surviving) and is thus generally taken by inhalation of the smoke given off when the drug is heated, usually in a pipe. This method of use gives the most pronounced effects.

5.16 “Freebasing” is the process whereby the user heats cocaine hydrochloride powder with an alkali such as sodium bicarbonate to “free” the cocaine alkaloid “base” from the salt. Alternatively cocaine hydrochloride can be mixed (“washed”) with ammonia and the resulting precipitate dried. Adding ether to the mixture with ammonia is less commonly employed by users preparing the freebase from cocaine hydrochloride but may be used in the preparation of “crack” for distribution. The name “crack” derives from the sound the “rocks” of cocaine make as they are heated to be smoked.

5.17 Some users attempt to recycle cocaine from crack pipes. After a pipe has been used for a period of time residues of cocaine build up on the pipe. Some users recycle this so that it can be smoked. There are two ways of doing this:

- scraping cocaine residue from insides with razor; and
- dissolving the cocaine residues in acetone.

5.18 The frequency of cocaine use varies considerably. “Recreational” use is relatively common with individuals taking the drug only occasionally (often “snorting”). This is often in association with social activities and includes weekend use. Daily use occurs as does heavy and intermittent use or “bingeing”. Binges tend to take the form of repeated dosing with the drug, often in escalating amounts over a period of hours or days, terminating in a “crash” with exhaustion and depressive symptoms.

5.19 As the effects are relatively short lived and intense, there is a marked drive to repeatedly obtain the drug and avoid the withdrawal symptoms.

5.20 Cocaine may be used in association with other drugs such as alcohol or heroin. The injecting of heroin together with cocaine (“speedballing” or “snowballing”) is a highly dangerous practice that is becoming more prevalent in Scotland.

Physical health problems associated with cocaine use

5.21 There is a wide range of physical and psychiatric problems associated with cocaine abuse, many of which are serious and may even be fatal.

5.22 Cardiovascular: Cocaine abuse can be linked to virtually every type of heart disease. Various cardiac arrhythmias (abnormal heart rhythms) can be induced by cocaine. Sinus tachycardia (increase in heart rate) usually occurs soon after its ingestion. Also associated are sinus bradycardia (reduction in heart rate), ventricular ectopics (irregularities in the heart rate), ventricular tachycardia, fibrillation (irregular, excessive and dysfunctional heart rhythm) and asystole (no heart beat). Blood pressure is affected causing hypertension that is dose related and may result in strokes. Spasm may occur in the coronary arteries resulting in myocardial infarction (heart attack). Long term cocaine abuse may lead to interstitial fibrosis (a lung disorder) and eventually to congestive cardiac failure.

5.23 With chronic use the cardiovascular system is prematurely aged. This and the other cardiovascular effects are of particular relevance to Scotland where the prevalence of cardiovascular problems is particularly high anyway.

5.24 Neurotoxicity: Cocaine may cause seizures or unmask a epilepsy. Cerebrovascular ischaemia (decreased oxygen to the brain) may result in small ischaemic cerebral infarcts (strokes) and haemorrhagic cerebrovascular accidents (bleeding into the brain) may be associated with hypertensive episodes. Brain perfusion deficits and associated neuropsychological compromise (such as deficits in attention, concentration, new learning, visual and verbal memory and word production) may be persistent. Tics, stereotypies of speech or movement, ataxia and disturbed gait may occur which may disappear after the drug use is stopped.

5.25 Sexual function: Chronic use may result in hyperprolactinaemia (altered hormone function) and gynaecomastia (breast growth) together with impotence. There are also incidences of deranged menstrual function, galactorrhea, amenorrhea and infertility.

5.26 Other effects: The drive to eat in chronic cocaine users is depleted resulting in significant weight loss and poor nourishment leaving the individual more susceptible to infection. Hyperpyrexia (uncontrolled raising of the body temperature) may occur due to hypermetabolism associated with peripheral vasoconstriction and impairment in the ability to regulate body heat. Rhabdomyolysis, a muscle wasting condition, has been associated with cocaine abuse. This may lead onto acute renal failure and disseminated intravascular coagulation and possible death.

5.27 Many of the potential health risks of cocaine use are specific to the route by which the drug is taken. Intranasal use can result in sinusitis, loss of sense of smell, nasal mucosa atrophy (destruction of the lining of the nasal passages), nose bleeds, nasal septum perforation, hoarseness and problems with swallowing. Taking cocaine orally can result in bowel ischaemia or necrosis (death of the bowel tissue) and gangrene. This is usually associated with “body-packers” who have swallowed condoms filled with cocaine that subsequently burst.

5.28 Smoking crack can result in ‘crack lung’ which presents with the symptoms of severe chest pains, breathing problems and high temperature and can proceed onto respiratory

failure and death, severe chest pain or dyspnoea. A variety of other respiratory effects of smoking cocaine have been reported including chest pain, breathlessness, pneumonia, pulmonary oedema (fluid in the lungs), pneumothorax (air escaping from lungs into the chest), pneumopericardium (air around the heart), diffuse alveolar haemorrhage (bleeding into the lungs), haemoptysis (coughing up blood) and asthma. Respiratory failure may occur resulting in death. The hot vapour inhaled during smoking may result in burns to the lining of the mouth and throat of which the user may be initially unaware due to the anaesthetic actions of the cocaine.

5.29 Intravenous use can result in cellulites (skin infection), abscesses, septicaemia, endocarditis (chronic infection of the heart lining and valves), arterial thrombosis (blood clots), renal infarction (death of parts of the kidney), and thrombophlebitis. Sharing of injecting equipment raises the risks of contracting a range of infectious diseases including septicaemia, hepatitis B & C, HIV and subsequently AIDS.

5.30 Poisoning with ammonia from protracted use of poorly manufactured crack is a potential health risk as are problems associated with acetone (used to reclaim cocaine from crack pipes) which may cause kidney, liver and nerve damage

5.31 Alcohol is often taken along with cocaine. In the body this forms a third substance, cocaethylene. Cocaethylene has similar effects to cocaine but lasts longer before being broken down by the body. It is also more toxic and causes more physical harm, especially to the cardiovascular system, accentuating the premature aging of this system, development of atherosclerosis and increasing the overall morbidity and mortality associated with cocaine use. This is of particular importance in Scotland, which already has a high incidence of cardiovascular morbidity.

Psychiatric problems associated with cocaine use

5.32 Psychiatric problems due to cocaine use are common with chronic use, high dose or bingeing episodes and appear particularly associated with the use of “crack” cocaine. General symptoms which have been described include impaired judgement, grandiosity, combativeness and extreme psychomotor stimulation. Anxiety and panic attacks during the use of cocaine are common. With chronic use of cocaine such reactions can occur spontaneously without drug-induced stimulation and may persist even after the use of cocaine has stopped. Depressive symptoms often occur especially following a period of heavy use, the “crash” and can be so severe as to lead to suicidal thoughts or acts.

5.33 Chronic use or heavy binges can lead to the development of paranoid ideation associated with anxiety. This may progress onto a psychotic disorder with paranoid delusions of persecution, hallucinations (which may be auditory or tactile “cocaine bugs”), anxiety with panic attacks, psychomotor hyperactivity and agitation. Confusion and aggressive behaviour may develop and in such a state, which some term “excited delirium”, violent behaviour may ensue and the individual require restraint and detention prior to treatment. During such restraint, however, sudden deaths have been reported. The symptoms usually resolve over hours or days of stopping the cocaine use but may be more persistent.

5.34 Cocaine use can lead to impairments in brain function through decreased perfusion and multiple small ischaemic infarcts (strokes). This may affect the ability of the individual to take part in treatment successfully.

Effects of maternal stimulant use on the fetus and children

5.35 Recent animal studies suggest that cocaine may be particularly harmful to the fetus in the early stages of brain development. Mainly American research has shown that babies whose mothers used crack/cocaine during pregnancy can suffer a variety of serious consequences. They are more likely than matched controls to be born prematurely, and to be smaller and lighter. Marked withdrawal symptoms can occur soon after birth. A number of controlled studies have shown that children of cocaine using mothers are more likely to develop cognitive, attention disorders and anti-social or offending behaviour.

5.36 There has been little research on maternal amphetamine use. What there is suggests the effects are similar to those of cocaine. The effects on the fetus of exposure to multiple drugs that include stimulants are unpredictable but likely to be harmful.

5.37 The extreme mood swings and erratic behaviour that characterise heavy stimulant use are not conducive to good parenting.

Pharmacological interventions

6.1 A number of systematic reviews have looked at pharmacological treatments for psychostimulant users. There is no strong evidence to support any single treatment for cocaine or amphetamine users. However, there is also no evidence to prove that such treatments are ineffective. The focus of research and practice has been on symptomatic medication that relieve symptoms of withdrawal, rather than medications that provide a substitute.

6.2 However, we recognise that there may be some scope for substitute approaches. For some amphetamine users substitution with dexamphetamine may be appropriate. There does appear to be growing evidence for the role of prescribed dexamphetamine. Equally for some crack/cocaine patients the use of supportive therapy may reduce some of the adverse effects associated with use of this group of drugs.

6.3 Overall, care should be exercised when interpreting prescription data for products that could be used for the pharmacological treatment of stimulant use as most of the products concerned are licensed for other conditions. For instance methylphenidate is increasingly recognised as an appropriate treatment for hyperactivity in children, adolescents and some adults with Attention Deficit Hyperactivity Disorder (ADHD). Current prescription statistics for methylphenidate most probably reflect the presence of a consultant paediatrician with expertise in the diagnosis and assessment of ADHD rather than misuse/inappropriate use of the medication. (See Annex C which reviews research literature relating to treatment.)

Psychological / psychosocial interventions

6.4 Psychological and psychosocial interventions are widely used with psychostimulant users, sometimes as a standalone intervention, and sometimes in conjunction with a pharmacological intervention. These include cognitive behavioural therapy (CBT) which is currently used with psychostimulant users in Scotland. (CBT refers to therapies that aim to alter thinking patterns and behaviour.) As with pharmacological treatments, the research evidence on the effectiveness of psychosocial interventions is limited, but promising. There are a number of reviews and primary research studies underway to examine this further.

6.5 Psychological treatment is predominantly useful to prevent relapse. Discrepancies in treatment outcomes between individuals with similar demography, drug abuse characteristics and severity of the dependence may arise because of existing cognitive impairments which prevent the patient from being able to profit from the treatment on offer. It is therefore important to recognise cognitive deficits early in the treatment programme so that alternative and perhaps more structured and direct approaches can be utilised.

6.6 Complementary therapies, such as auricular acupuncture, are increasingly offered to psychostimulant users. There is little clear evidence of their effectiveness, but there is some evidence to suggest that acupuncture is capable of attracting users into treatment and encouraging them to remain in treatment. Current research emphasises the need to consider the role of complementary therapies in a broader treatment plan, rather than as a standalone intervention. (See Annex C)

Emergency treatment and management of cocaine/crack users

6.7 Typical symptoms of cocaine/crack users presenting to A&E fall into three categories:

- psychological - agitation, paranoia, confusion, hallucinations, aggression;
- neurological - collapse, convulsions, cerebrovascular accident;
- cardiovascular - blood clotting, chest pain, palpitations, breathlessness, increase in blood pressure, heart attack.

6.8 Additional effects due to the mode of use:

- short term - airways damage, "crack lung" (crack); runny red nose (cocaine);
- long term - probable lung damage (crack), nasal septum damage (cocaine)

6.9 Situations which may bring users into A and E include:

- myocardial ischemia/infarction;
- seizures and cerebrovascular accidents;
- collapsed lung;
- premature labour;
- excited delirium - the physical effects of excited delirium are characterised by hyperthermia and dilated pupils; the psychological effects include extreme agitation, paranoia, violence and disinhibition. Restraint can lead to a paradoxical situation where the patient becomes very tranquil and death may occur. Diazepam is the treatment of choice for excited delirium.
- thermal injury from inhalation;
- upper airway burns. These are a rare but potentially lethal complication of crack cocaine use; and
- the anaesthetic effect of crack cocaine which reduces awareness of the burning effects of smoke.

6.10 In addition there is a potentially dangerous interaction between cocaine and alcohol. The combination increases the euphoric effects of cocaine through the production in the liver of cocaethylene, a long acting ethyl homologue of cocaine, which may increase the risk of sudden death. Alcoholics Anonymous in the UK has recorded a significant increase in the number of members discussing their cocaine use at regular AA meetings.

6.11 The management of emergency situations resulting from the use of cocaine and crack involve the use of, diazepam (psychiatric/psychological effects), aspirin and nitrates (cardiovascular effects) and oxygen (respiratory effects).

7.1 There is limited evidence about the effectiveness of drug services designed to meet the needs of stimulant users. What evidence there is comes mainly from England and the United States. Evaluations generally show that services need to be designed to take into account the socio-demographic profiles of psychostimulant users, and that a range of support and treatment must be available to address the diverse needs of this group.

7.2 What is clear is that stimulant drug users perceive existing drug services to be the preserve of opiate users. This is reflected in both the research literature and in findings of the consultation conducted by the Scottish Drugs Form for the Working Group. It is clear that decisions on how to re-configure or redesign services to meet the need of stimulant drug users should be based on local needs assessments. The Piper Project in Manchester conducted a local needs assessment early in the project's development to help assess the number of stimulant users in the area and to assess their needs. The results of the assessment were then used to plan a specific service for cocaine and crack users.

Graduation of need

7.3 The research literature, analysis of existing data and the consultation with users show that stimulant drug users are not a homogeneous group. There are (at least) four broad categories of stimulant users, each with differing needs.

- Firstly, there is the group of youthful drug experimenters who are likely to use stimulants as part of a pattern of poly-drug experimentation. They are unlikely to be in touch with any Scottish drug service, other than those providing drug information. Their social and demographic profile is mixed and reflects the increased acceptance of drug use within the youthful population. These are the **youthful experimenters**.
- Secondly, there is the group of established primary stimulant drug users. These individuals will typically be using stimulant drugs regularly (weekly). Their social and demographic profile matches that of the youthful experimenters. They may have had some contact with drug information services but are unlikely to have used any other drug service. These are the **regular stimulant users**.
- Thirdly, some of the above are beginning to experience problems.. They will have been regular stimulant users for at least a year. They have a similar social and demographic profile to the first two groups. This is the group that is most likely to be looking for services which do not currently exist. These are **problematic stimulant users**.
- Finally, there are the individuals who are primarily opiate users who use stimulants as well. These are the individuals who are most likely to be in touch with existing services but whose needs in relation to the stimulants, may not be well served. It is from this group that the Scottish Drug Misuse Database figures about crack use have come. We could call this group the **opiate/stimulant co-users**. Their demographic profile is similar to the opiate drug-using group.

7.4 Given the diversity of the stimulant drug using population, and the differing needs of each group of users, it is clear that ideally service interventions should be provided at a range of levels to meet the gradations of need. However, there are likely to be a number of key principles of service provision including:

- easy access to services (including opening times and location);
- multiple points of entry;
- person-centred and timely and shared assessment procedures;
- information and support services when required;
- specific pharmacological/psychological and psychosocial interventions when required;
- effective referral procedures and protocols to ensure an integrated approach to providing treatment and care (including specialist mental health and detoxification services where necessary.)
- support for children of psychostimulant users when appropriate; and
- access to social care and accommodation.

Survey of users' views

7.5 A recent qualitative study was undertaken by the Scottish Drugs Forum of psychostimulant users to elicit the views of users on their needs and current service provision. (See Annex E for summary of this study - a copy of the study itself is available on request.)

7.6 The findings of the study indicate that:

- there should be different approaches that recognise the diversity of users;
- short term prescribing of dexamphetamine is helpful to keep users off the streets;
- drug agency workers and health care professionals need more information and training about stimulants ;
- there is a need for improved co-ordination between services;
- there is a need for early access to confidential trustworthy advice and information without recourse to a GP;
- the present variety of treatment approaches should be encouraged;
- employment support is also needed; and
- ex users should be involved in delivering services.

7.7 Turning Point Scotland reports a marked increase in cocaine use since last September, predominantly among heroin users and says that: the common issues for cocaine users are financial debt, family breakdown, the threat of homelessness, contact with the criminal justice system and post binge depression. Physical symptoms include malnourishment and respiratory problems. Immediate practical assistance and intensive one-to-one support, on occasion with a short pharmacological intervention, brings very positive results. The service finds that complementary therapies are more than a way of retaining users in services and that they can contribute to decreasing agitation and stress. Turning Point Scotland believes that the operation of appointment systems is the reason for the low uptake of services among cocaine users, that there is only a small window of opportunity for interventions and stresses that the way in which services are marketed is important.

A model for delivery

7.8 The diagram in Annex F outlines one model (by way of example) of how services might look when fitted to the needs of stimulant users. The emphasis of the model is on 'low threshold', easy access to services, while ensuring that specific interventions are available to individuals who would benefit from them. This would include mental health specialists and detoxification services. A further feature of note in the model is the multiple points of entry into services and the availability of intermediate assessment. Further discussion of models of service delivery for stimulant users can be found in the Models of Care Guidance by the National Treatment Agency (2002).

GP role

7.9 It is important that GPs and other primary care professionals are aware of the signs of problem stimulant use, so that they can give information and make appropriate referrals. GPs are often the first point of contact for drug users, especially stimulant users who have a different socio-demographic profile from primary opiate users. It is important for this contact to be as productive as possible, that GPs adopt a non-judgmental attitude and have basic knowledge about psychostimulants and their complications. GPs can provide basic health care needs for stimulant users including assessment of physical health including assessment of injection sites if appropriate. Mental health assessment is vital in the case of psychostimulant drug users and GPs should be able to carry out a basic assessment and arrange for onward referral as necessary. Health Promotion advice is of particular importance in this area given the potential cardiac complications of cocaine use in a population with high rates of cardiovascular disease.

Information needs

7.10 A few opiate focused services in Scotland have adapted their provision to accommodate the needs of primary stimulant users but in only two instances have specific services for stimulant users been developed. One of these has a focus on Cognitive Behavioural Therapy (CBT). There are currently proposals for a demonstration project to establish and conduct assessment, peer support and CBT services for stimulant users in Edinburgh. (See Annex F for middle section of proposed model.)

7.11 There has been no national mapping exercise of services to identify to what extent services are addressing the need of stimulant users, although, as already mentioned, there are plans for COCA UK to undertake a mapping exercise in Scotland. However, a small case study in one DAT area with a relatively high incidence of stimulant use was undertaken for the Working Group by a voluntary sector agency. It found that services for drug users in the area had been developed in response to the increasing demand from dependent opiate users and that there was only one agency specifically targeted at stimulant users. In response to an informal survey, all of these services reported that they had generic services, catering for all groups of people who use all types of drugs. However, in practice, it appeared that the majority of referrals, services, programmes and interventions were focussed on opiate using clients. The one service set up in the area to target stimulant users did so through a project running outreach services in clubs, dance events, local communities etc. largely using peer support.

7.12 When services in this area were compared to a service delivery model (see Annex F), numerous gaps in services for psycho-stimulant users were identified at all of the 3 service levels of the model. There were limited helpline services available to users and their families and outreach services were extremely limited. Shop front services for drug users did not exist. Only one agency provided outreach services for stimulant users. All the agencies in the area said they would provide a service for psycho-stimulant users who come to their attention from within their generic services and so stimulant users were not explicitly excluded. However, given the extent of waiting times for some services, it was doubtful that services could cope with the demand if targeting encouraged more users to access services. There were no facilities available in the area for acute interventions with psychostimulant users.

Case study of a specific service for stimulant users

7.13 Tim Bottomley from the Piper Project in Manchester gave evidence to the Working Group. He highlighted a number of lessons learned from his experiences of developing and managing the service:

- service design needs to take into account the profile of cocaine users, for instance by running out of work hours sessions and by advertising services in public places instead of relying on word of mouth;
- a great deal could be done to help problem cocaine users if they can be attracted and retained in a project
- it is important to focus on the provision of information and early intervention and also to offer a range of services, including drop in facilities and appointments, acupuncture, work with families etc;
- users come to the Piper Project through a range of different routes including relatives/friends, GPs referrals, and referrals from the criminal justice system;
- word of mouth does not seem to be as effective as with heroin users;
- the Piper Project has been client-led and had nonetheless developed into a predominantly abstinence service;
- there is a great deal to be gained from having ex users on staff and as volunteers;
- the Project is staffed only by 2 workers and volunteers, ideally it could double its size;
- the Project saw 10-20 clients per month, or around 240 per year, with an average stay of 4-6months (some clients stay only one month, though one had stayed 3 years).

Case study of a service for women stimulant users

7.14 Louise Clarke of Higher Insight has worked with women crack users in the East of London over the past 10 years. In developing services for women she argues that service providers must take into account women's need for anonymity and confidentiality and their need for childcare support, particularly when attending services. Women may prefer to work with a female drugs worker. She also notes that setting up a drug project at a venue like a community centre where child care provision is already established can overcome some of the fears women have about attending a service that is labelled as a 'drug project'.

Criminal justice services

7.15 A number of opportunities exist within the criminal justice system to identify and respond to existing and new drug misuse patterns, including psychostimulant use. These include:

- referral to addiction services at time of arrest;
- formal diversion by the Procurator Fiscal to treatment services (as an alternative to prosecution);
- Drug Treatment and Testing Orders;
- using conditions of treatment as part of community sentences such as probation, prison based and post-release treatment programme;
- the Glasgow Drug Court pilot, with its intensive ‘enhanced probation’ option along with Drug Treatment and Testing Orders bringing a particular emphasis on treatment based approaches;
- Arrest Referral Schemes which provide an opportunity for intervention at a point of crisis by making appropriate referrals to local agencies;
- structured programmes for those with deferred sentences offering scope for treatment;
- prison-based services which medically assess all those admitted to prison and offer addictions assessment and individualised care-planning to all identified substance misusers, including those using psychostimulants.

7.16 In Fife the Drug Treatment and Testing Orders include a number of primary stimulant users and have attempted to provide alternative treatment options for this group, including psycho-social interventions. By contrast, in Glasgow, although the Drug Treatment and Testing Orders and the Drug Court have identified persons using cocaine secondary to opiate use, there do not appear to be any treatment options to deal with stimulant use.

7.17 COCA UK has developed guidelines to prison workers for use in England and Wales. (See Annex D.) The Scottish prison population has a different profile, particularly its racial mix, and consideration would be needed to develop these guidelines to reflect Scottish conditions. There are of course similar management issues, particularly of the symptoms associated with withdrawal from cocaine on entering prison and the increased risk of suicide. There is an awareness and training issue for the Scottish Prison Service as for other services which work with drug users who may use cocaine.

ANNEX A: EXTENT OF THE PROBLEM

STATISTICAL DATA

Table 1: Lifetime and Recent Use (%) of Psycho-stimulants and Cannabis Amongst Scottish Adults

		Cocaine		Crack Cocaine		Amphetamine		Cannabis	
		M	F	M	F	M	F	M	F
16-19	Ever	3.8	5.1	1.0	2.9	6.7	8.1	25.2	24.3
	Last 12 mths	0.0	1.5	0.0	0.0	1.0	0.7	10.6	18.4
20-24	Ever	8.3	4.3	1.0	2.2	15.0	15.2	46.3	32.6
	Last 12 mths	5.4	3.8	0.0	0.0	3.4	0.0	17.6	13.0
25-29	Ever	10.5	2.0	2.3	0.7	16.5	8.1	42.9	25.2
	Last 12 mths	0.8	0.7	0.0	0.0	0.5	0.7	15.8	8.8
16-59	Ever	3.7	1.4	1.2	0.7	7.6	4.9	21.5	13.4
	Last 12 mths	0.6	0.9	0.1	0.0	0.9	0.2	6.6	4.5

Source: 2000 Scottish Crime Survey

PROFILE OF 2000/01 COCAINE USERS, SCOTTISH DRUG MISUSE DATABASE

In the year 2000/01 there were 556 individuals who reported use of cocaine (including crack cocaine) to the Scottish Drug Misuse Database. The majority of these (63%) reported the use of cocaine as secondary to use of an opiate as their main drug. A small group (<1%) reported cocaine as their main drug of use with opiates as secondary.

Of the 556 reports to the SDMD, 47 (8%) reported use of cocaine alone. The demographics of this group are markedly different to those who are also using opiates (whether as a primary or secondary drug). The cocaine only group are, with one exception, exclusively male. This group also tends to be more stable with regard to social factors, i.e. employment, accommodation.

The numbers reporting to services for cocaine use alone are extremely small, but it should be borne in mind that this is in spite of the fact there are no psycho-stimulant specific services available in Scotland.

The numbers of individuals reporting any use of cocaine has risen steadily from 2% of all reports in 1996/97 to 5% in 2000/01. It is worth noting that the cocaine only group has increased from 6% in 1996/97 to 8% in 2000/01.

Table 2: Gender of cocaine users, percentage of new individual patients/clients years ending 31 March.

	1996/97	1997/98	1998/99	1999/00	2000/01
Any mention of cocaine					
Male	76.8	83.3	79.3	77.8	82.2
Female	23.2	16.7	20.7	22.2	17.8
Cocaine only					
Male	80.0	86.7	84.6	86.4	97.9
Female	20.0	13.3	15.4	13.6	2.1
Cocaine as main drug and opiate as secondary					
Male	80.0	100.0	92.3	72.2	90.5
Female	20.0	0.0	7.7	27.8	9.5
Opiate as main drug and cocaine as secondary					
Male	83.1	84.8	78.3	76.5	79.4
Female	16.9	15.2	21.7	23.5	20.6

Source: Scottish Drug Misuse Database unpublished data

N.B. Please note that all figures exclude reports from needle exchanges and penal establishment inmates and that for these analyses cannabis has not been regarded as a drug of misuse.

Table 3: Living situation of cocaine users, percentage of new individual patients/clients year ending 31 March 2001

	Any mention of cocaine	Cocaine only	Cocaine as a main drug and opiate as secondary	Opiate as main drug and cocaine as secondary
Total	556	47	21	349
Lives alone	21.9	8.5	33.3	20.1
Lives with parents	29.7	25.5	28.6	28.9
Lives with spouse/partner	27.3	53.2	28.6	25.8
Lives with spouse/partner and parents	0.4	0.0	0.0	0.6
Lives with other persons	8.3	4.3	0.0	10.0
Lives in residential rehabilitation	4.3	0.0	4.8	6.3
No fixed abode	3.4	0.0	4.8	4.0
Other	2.5	2.1	0.0	2.9
Information unavailable	2.2	6.4	0.0	1.4

Source: Scottish Drug Misuse Database unpublished data

N.B. Please note that all figures exclude reports from needle exchanges and penal establishment inmates and that for these analyses cannabis has not been regarded as a drug of misuse.

Table 4: Employment status of cocaine users, percentage of new individual patients/clients year ending 31 March 2001

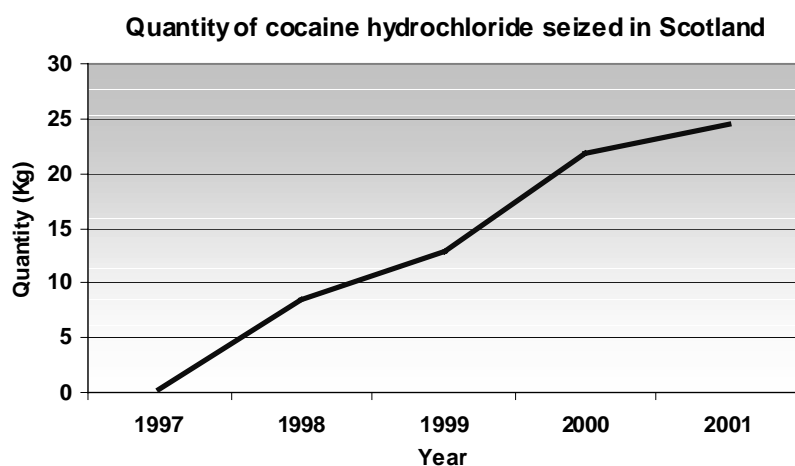
	Any mention of cocaine	Cocaine only	Cocaine as a main drug and opiate as secondary	Opiate as main drug and cocaine as secondary
Total	556	47	21	349
Never employed	12.4	2.1	9.5	15.8
Unemployed (1 year or longer)	44.2	19.1	47.6	54.2
Unemployed (less than a year)	16.5	21.3	14.3	14.3
Employed (includes self employed)	21.4	51.1	23.8	11.5
Student	1.6	2.1	0.0	0.9
Housewife/husband	0.2	0.0	0.0	0.0
Invalidity	0.9	0.0	4.8	0.9
Did not wish to answer	0.4	0.0	0.0	0.6
Other	0.4	0.0	0.0	0.3
Information unavailable	2.0	4.3	0.0	1.7

Source: Scottish Drug Misuse Database unpublished data

N.B. Please note that all figures exclude reports from needle exchanges and penal establishment inmates and that for these analyses cannabis has not been regarded as a drug of misuse.

DATA ABOUT SEIZURES

Figure 1



Source: Unpublished report by the Scottish Drug Enforcement Agency and the National Criminal Intelligence Service: *The Impact of Cocaine and Crack Cocaine*, 2002

Table 5: Cocaine Seizure Table

	1996		1997		1998		1999		2000		2001	
	Grams	Value (£)	Grams	Value (£)	Grams	Value (£)	Grams	Value (£)	Grams	Value (£)	Grams	Value (£)
Central	2	100	13	630	11	550	47	2,350	107	5,350	59	2,950
Dumfries & Galloway	~	~	~	~	~	~	~	~	252	20,000	410	24,000
Fife	6	609	65	6,520	102	10,200	2	200	1,485	132,730	366	34,420
Grampian (Cocaine)	209	17,880	269	23,040	150	12,840	313	26,820	679	58,200	3,767	262,500
		-		-		-		-		-		-
		23,840		30,720		17,120		35,720		77,600		
Grampian (Crack)	-		44	11,000	317	79,250	469	117,250	154	38,500	887	221,750
Lothian and Borders	19 seizures **		47	3,720	880	70,360	221	13,260	5,877	352,590	734	29,360
												-
												44,040
Northern (Cocaine) ***	^	2,000	^ + 4 ounces	10,960	^	2,000	^	2,000	33	2,000	43	5,425
Northern (Crack) ***											16	
Strathclyde					13,857		6,339	507,120	14,249	1,139,920	8,749	437,448
Tayside	7	436	28	1,709	130	7,808	108	6,476	1,020	61,226	1,191	71,491
											~~	

~Very minimal amounts of a few grams seized

**Specific weight unavailable

***Northern has not compiled records of cocaine seizures prior to 2000 other than through Home Office Crimesec Forms which are now archived, therefore, seizure figures are approximates

^ Minimal seizures ie. less than 25g

****Parameters differ for Strathclyde:13,857.62g (Oct 1998 - March 1999); 6,339.14g (Apr 1999 - March 2000); 14,248.7g (Apr 2000 - March 2001) 8,748.97g (April 2001 - Sept 2001)

~~ As at 04/11/01 for Tayside

Source: Unpublished report by the Scottish Drug Enforcement Agency and the National Criminal Intelligence Service: The Impact of Cocaine and Crack Cocaine , 2002

ANNEX B: THE ADVERSE EFFECTS OF USE

POTENTIAL HEALTH PROBLEMS ASSOCIATED WITH AMPHETAMINE USE

PHYSICAL	PSYCHIATRIC
<p>General</p> <ul style="list-style-type: none"> • rapid heart rate • irregular heartbeat • increased blood pressure • stroke • increase in body temperature • convulsions • diminished appetite and nutrition • increased risk of infections 	<p>Early</p> <ul style="list-style-type: none"> • agitation • anxiety • panic
	<p>With chronic or high dose</p> <ul style="list-style-type: none"> • cognitive impairments • suspiciousness • severe anxiety • repetitive meaningless motor activities
<p>Intravenous use</p> <ul style="list-style-type: none"> • cellulitis • inflammation and blood clots in veins • abscesses • septicaemia • occlusive blood clots in arteries • infection of heart lining and valves • kidney problems • lead poisoning 	<p>Amphetamine Psychosis</p> <ul style="list-style-type: none"> • paranoid delusions of persucution • hallucinations • confusion • sudden acts of violence
<p>Sharing of Injecting Equipment</p> <ul style="list-style-type: none"> • risk of Hepatitis B and C, HIV & AIDS 	<p>On stopping use</p> <ul style="list-style-type: none"> • depressive symptoms • low energy • craving • insomnia followed by hypersomnia

POTENTIAL HEALTH PROBLEMS ASSOCIATED WITH COCAINE USE

PHYSICAL	PSYCHIATRIC
<p>General</p> <ul style="list-style-type: none"> • premature ageing–cardiovascular system • abnormal heart rhythm and rate • heart attack • elevated blood pressure • stroke • muscle breakdown • acute kidney failure • increase in body temperature • convulsions • epilepsy • tics • disturbed speech and movement • altered hormone levels • impotence • breast growth • stopping of periods • infertility • diminished appetite and nutrition • increased risk of infections 	<p>Early</p> <ul style="list-style-type: none"> • restlessness • grandiosity • impaired judgement • indulging in high risk behaviours • combativeness • anxiety • panic attacks • paranoia • depressive symptoms • suicide <p>Psychosis</p> <ul style="list-style-type: none"> • paranoid delusions • hallucinations (voices & “cocaine bugs”) • hyperactivity • agitation • confusion • “excited delirium” • violent behaviour
<p>Intranasal use</p> <ul style="list-style-type: none"> • sinusitis • loss of sense of smell • destruction of nasal passage lining • hoarseness • swallowing difficulties 	<p>Cognitive deficits</p> <ul style="list-style-type: none"> • impaired attention • impaired concentration • new learning difficulties • visual and verbal memory problems
<p>Oral use</p> <ul style="list-style-type: none"> • death of bowel tissue • gangrene of the bowel 	

.....continued on next page.

Smoking	
<ul style="list-style-type: none"> • burns to the mouth and throat • breathlessness • chest pain • asthma • coughing up blood • fluid in the lungs • pneumonia • respiratory failure • ‘Crack Lung’ • severe chest pains • breathing problems • high temperature • respiratory failure 	
Intravenous use	
<ul style="list-style-type: none"> • cellulitis • inflammation and blood clots in veins • abscesses • septicaemia • occlusive blood clots in arteries • infection of heart lining and valves • kidney problems 	
Sharing of Injecting Equipment	
<ul style="list-style-type: none"> • risk of Hepatitis B and C, HIV & AIDS 	
Poisoning - chemicals used in manufacture	
<ul style="list-style-type: none"> • acetone • ammonia 	
Using with alcohol	
<ul style="list-style-type: none"> • forms cocaethylene • more toxic • more rapid ageing—cardiovascular system 	

Treatment for Cocaine Users

The possible treatments for cocaine misuse and the evidence of their effectiveness have been the subject of reviews conducted by a number of American academics. To date, most of our knowledge about treating cocaine use comes from the United States following an increase in cocaine use in the 1980s. Overall, there is no evidence to strongly support any single treatment (either symptomatic or substitute). The focus of research has been on symptomatic medications that relieve withdrawal, rather than medications that provide a substitute for cocaine. The UK Departments of Health Guidelines (Drug Misuse and Dependence: Clinical Management, 1999) clearly state in their guidelines that there is no indication for the prescribing of cocaine in the treatment of withdrawal.

Controlled trials have mostly focused on despiramine. A meta-analysis shows a benefits (compared to the placebo) for promoting abstinence among cocaine users, but no effect on their retention in treatment. Carbamazepine has also been advocated. However, there is currently no evidence to support the clinical use of carbamazepine in the treatment of cocaine dependence. A systematic review of the five randomised controlled trials of the drug found no evidence to support its use with cocaine users. A further systematic review examining the use of anti-depressants examined 18 randomised controlled studies which concluded that there was no evidence for supporting the clinical use of antidepressants in the treatment of cocaine dependence. Another systematic review that addressed the use of dopamine agonists for cocaine dependence concluded that current evidence does not support the clinical use of these. The authors suggest that given the high rate of drop-out in the population, that clinicians should consider the use of psycho-therapeutic measures to help retain patients in treatment settings. Finally, an American study suggests that combining disulfiram with buprenorphine can reduce cocaine misuse in heroin users who also use cocaine.

Treatment for Amphetamine Users

As with treatment for cocaine users, the overall research evidence on treatments for amphetamine dependence is limited. However, a number of potential treatments have been studied. Fluoxetine, amlodipine, imipramine and desipramine appear to have very limited benefits for amphetamine dependence. Fluoxetine may decrease craving in the short-term and imipramine may increase the duration of adherence to treatment. A further systematic review on treatments for amphetamine psychosis found very limited evidence on effectiveness. The results of two studies among amphetamine users show that agitation and some psychotic symptoms may abate within one hour of an antipsychotic injection.

Dexamphetamine sulphate is the most frequently studied drug for amphetamine users. It has been prescribed in England and Wales for the treatment of primary amphetamine use, though the Department of Health Guidelines suggest that prescribing should be restricted to particular groups. These studies have generally prescribed dexamphetamine sulphate to long term amphetamine injectors. There does appear to be growing evidence for the role of prescribed dexamphetamine. In response, a two-centre randomised controlled trial of dexamphetamine substitution as a treatment of amphetamine dependence is underway in England, funded by the Department of Health. The study will assess the effectiveness of the

treatment, describe the nature of benefits and harms associated with the treatment and contribute to the development of best practice guidance. This study will report later in 2002.

Non-pharmacological treatments

As with pharmacological treatments, the evidence of the effectiveness of psychological and psycho-social interventions with psychostimulant users is currently limited, but promising. There are a number of studies underway in this area including a systematic review of psycho-social treatments for psychostimulant dependants. This review falls under the auspices of the Cochrane collaboration library of systematic reviews. Further, an evaluation of a brief intervention model for young non-injecting stimulant users in London (16-22 years) is underway. The latter evaluation is being funded by the Department of Health and will report in summer 2003.

Systematic counselling forms the basis of most community-based treatments for psychostimulant users. Some authors advocate counselling for short-term, occasional (and non-injecting) users with no other treatment intervention. For longer-term, 'problem' users (including injectors) some authors argue for counselling plus symptomatic medication (e.g. fluoxetine). A range of approaches have been tried.

A further study examined the impact of coping skills training and suggested it could be beneficial for avoiding relapse in cocaine users. A further study used material incentives (usually vouchers) as rewards for cocaine free urines. A controlled trial of this approach indicated there were benefits to using incentives and counselling when compared to counselling alone.

The lack of available psycho-social treatments or interventions is quoted in the research literature as a barrier to service utilisation among psychostimulant users. The major barrier to service up-take, however, is the perception of services as providing treatment and care for opiate users. Evidence suggests that those seeking help for psychostimulant use problems were less likely to have received treatment than those with opiate users.

Complementary therapies

There is little clear evidence of the effectiveness of acupuncture for treatment of psychostimulant dependence as a stand-alone intervention. Nonetheless, it may be a means of attracting drug users into treatment, and encouraging them to remain in treatment. A recent randomised controlled trial of the use of acupuncture in the treatment of cocaine addiction does not support the use of acupuncture as a stand-alone treatment, or when only minimum psychosocial treatments are provided. The authors emphasise the need for further research to identify the possible role of acupuncture in a broader treatment plan for cocaine or amphetamine users. In this study, there were no differences between groups in treatment condition or in treatment retention. However, a further randomised controlled trial of auricular acupuncture for cocaine dependence showed that those participants who received acupuncture were more likely to provide cocaine negative urines relative to controls. Finally, a controlled study conducted in the early 1990s showed limited benefits of acupuncture over 'placebo' acupuncture.

Other information

The English National Treatment Agency (NTA) plans to review the evidence base on ‘what works’ with stimulant misusers (and in particular with crack misusers) in the next 6-12 months. This evidence base will be used to design a number of evidence-based programmes. The NTA will then work with commissioners to commission these new approaches and will be directly involved in evaluating their implementation and effectiveness.

Another useful source of information on psychostimulants and treatment for psychostimulant users is the recently published Department of Health Models of Care Guidance, one chapter of which is dedicated to psychostimulant users.

ANNEX D: COCA UPDATES

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COCA UPDATE - COCAINE ACID AND ALKALOID FORMS:

There are basically two different states of cocaine:

Form	Acid or Alkali	Type
Base form	Alkaloid	Basuco, Freebase or Crack Cocaine
Salt form	Acid	Cocaine Hydrochloride or crack prepared for injection using an acid

When cocaine is first produced it is in its *base form* and is therefore an alkaloid. Hydrochloric acid is then used in a process to turn it into a *salt form* which is now cocaine hydrochloride.

When ammonia, ether or bicarbonate of soda are used in the preparation of freebase or crack the cocaine is being returned to its base form (alkaloid). In its alkaloid state it is far easier to smoke as the melting point has been reduced hence the process before smoking.

Preparation for injection:

Crack cocaine or freebase cocaine in its alkaloid state does not return back to a hydrochloride state when it has been prepared for injection using vinegar, citric acid or vit C.

When acids are used to convert cocaine into an injectable form the cocaine is being converted into an acid form (salt). But the form of the cocaine is dependent on the type of acid used.

- Vit C - changes crack into cocaine ascorbate
- Citric Acid - changes crack into cocaine citrate
- Vinegar - changes crack into cocaine acetate

Cocaine hydrochloride is in an acid salt form so does not need to have an acid added to it as with crack and will dissolve in water alone.

Information from:

- *Yale School of Medicine, Department of Epidemiology and Public Health*
- *National Institute of Drug Addiction, USA*

COCA UPDATE - BLOOD BORNE VIRUSES:

The issue of blood borne viruses in connection with crack and cocaine use has to a large extent been ignored unless the route of use is injecting and even then important elements are not being addressed. There is a need to challenge this and disseminate information to users who are at risk.

HIV:

The main transmission route for HIV amongst crack and cocaine users is either through sharing contaminated needles or risky sexual behaviour. There is a tendency generally for risk taking behaviour to increase when taking cocaine, which in itself could increase the likelihood of the above transmission routes.

Recent research from the University of California has discovered that cocaine not only influences risk taking behaviour and consequent possible transmission but it also affects the AIDS viral load in the blood. Cocaine affects HIV in two ways:

1. Cocaine can double the amount of HIV infected cells
2. Cocaine can deplete the number of CD4 T-Cells by up to nine times.

The above combination can obviously have a dramatic affect upon the health of an individual who is HIV positive and taking cocaine, whether it is on a recreational basis or dependent use.

HCV:

The dangers of contracting Hepatitis C are again not confined to intravenous drug use. If Hep C positive cocaine use itself can exert strain upon the liver, let alone if alcohol is also used and the immune system can be impaired.

Injecting:

As mentioned above cocaine use can increase risk taking behaviour and anecdotal information suggests that injecting users of cocaine who are fully aware of safer injecting behaviour can ignore this when caught up in the chaos and compulsion of using. This can increase the risks of either accidental or risk taking transmission.

Smoking:

The use of crack can seriously dehydrate the body leading to lips becoming chapped. These can often be picked producing open wounds and the virus transmitted by pipe sharing. Some pipes can also cut the mouth when smoking, again increasing the risk. Open sores or wounds can also occur through burns received from pipes and lighters in the process of smoking.

Snorting:

When cocaine is snorted on a regular basis damage to nasal mucus membranes can occur causing the nose to bleed. The practice of sharing straws to 'snort' is quite common leading to the possibility of blood to blood transmission via the straw.

Harm minimisation:

- Users need to be informed of the above risks to enable them to make informed decisions and use safely.
- Advise users that **no** drug using equipment should be shared.
- Extra strong condoms/lubricants should be given to crack and cocaine users.

COCA UPDATE - RECYCLING COCAINE FROM CRACK PIPES

After a pipe has been used for a period of time residues of cocaine build up on the insides of the pipe. Some users recycle this so that it can be smoked through the pipe again. There are several ways to do this:

scraping the cocaine residue off the insides of a pipe with a razor;
dissolving the cocaine residues with nail varnish remover (acetone main ingredient);
dissolving the cocaine residues with acetone (C₃H₆O).

Methods using acetone:

Once a pipe has built up enough cocaine residues the holes are sealed up and a small amount of acetone or nail varnish remover is poured into the bottle and given a good shake. This process dissolves the cocaine residues into the acetone and allows it to be removed from the bottle.

The acetone is then poured onto a large mirror and set alight (it can also be left to evaporate). If not too much acetone is used then it should burn itself out in about 20 seconds. The cocaine residue is now on the mirror and is allowed to dry. When dry this can be scraped off with a razor (hence the need for the mirror) and smoked.

Some users report that the high that they get from recycled cocaine is better than a normal 'rock', but with crack purity being normally high there may be some other explanation for this other than increasing the purity.

How can acetone affect health?

If people are exposed to acetone, it goes into your blood which then carries it to all the organs in your body. If it is a small amount, the liver breaks it down to chemicals that are not harmful and uses these chemicals to make energy for normal body functions. Breathing moderate- to-high levels of acetone for short periods of time, however, can cause nose, throat, lung, and eye irritation; headaches; light-headedness; confusion; increased pulse rate; effects on blood; nausea; vomiting; unconsciousness, possible coma; and shortening of the menstrual cycle in women. Skin contact can result in irritation and damage to your skin.

Health effects from long-term exposure are known mostly from animal studies. Kidney, liver, and nerve damage, increased birth defects, and lowered ability to reproduce (males only) occurred in animals exposed long-term. It is not known if people would have these same effects.*

* *Agency for Toxic Substances and Disease Registry, Atlanta, USA*

Harm minimisation:

The best form of harm minimisation is to avoid, however the reality is that most users do it, so please advise them to:

have good ventilation in the room where the acetone is being used.

don't scrape plastic bottle as you can scrape off pieces of plastic as well.

be aware of the potential for accidental fire (especially if concentration is low due to lack of sleep).

Indicators:

The respiratory irritation or burning eyes that occur from moderate levels of exposure are good warning signs that they are exposing themselves too much and should not continue. If in doubt they should seek primary medical treatment as soon as possible.

COCA UPDATES - GUIDELINES FOR PRISON WORKERS (in England and Wales)

Although national statistics are showing an increase in the amount of crime related to this drug it doesn't necessarily follow that there will be a corresponding increase in the amount of cocaine used within the prison system. Many prisoners will not use cocaine throughout their sentence as availability/price make it difficult to maintain their previous habit and a drug that makes you more aware of your surroundings/increase paranoia is often in compatible with the prison setting. The issue of drugs within the prison system is very important although when talking about the issue of crack and cocaine in the prison system this raises issues that need to be specifically addressed:

- Many prisoners may not be forthcoming about their crack or cocaine use on arrest, or throughout their sentence, leading to no targeting for education, health etc.
- Cravings will, in most cases disappear, which in turn can lead a prisoner into a belief that they have not got a problem. Craving will usually reappear again on or just before release.
- Low levels of both dopamine and serotonin can lead to a chemical depression as well as the normal reactive depression. These feelings of depression could increase the likelihood of suicidal thoughts or attempts at suicide.
- Anxiety issues may be compounded due to the prison environment and also paranoia felt at the initial intake. Some cocaine users may have long term anxiety problems.
- Good health check ups need to be offered as health problems are often ignored when in the chaos of using. Attention needs to be paid to heart, lungs (especially T.B.), liver and dangers of particular routes of use.
- Because cocaine is a strong stimulant, hidden dependence to other substances such as alcohol, benzodiazepines and heroin may not be apparent to the prisoner until initial intake.
- Cocaine can act as a form of self medication with psychiatric conditions such as schizophrenia and ADHD. A worsening of these illnesses may occur some weeks after initial intake. Cocaine use can also figure strongly in conditions such as Bi-polar.
- The use of educational groups/individual sessions can work very well once the prisoner has settled into the prison routine. They can also be used as an opportunity to explain how cocaine works, triggers and cravings etc.
- Attention needs to be paid to pre and post release plans so that the issue of cravings/setting themselves up to use can be addressed and the chances of relapse reduced if the prisoner is looking at continuing abstinence from the drug.
- Prisons may want to look at the issue of harm minimisation in relation to release plans considering the nature of cocaine cravings. Special attention needs to be paid to injecting users and also the transmission of BBV's.
- The prison system can offer a good basic recovery package in the initial stages as lots of sleep and food is often the best method for primary cocaine use.
- Work looking at the connection between crime and cocaine use (fight and flight response/cravings) can be successfully done in the prison setting and can increase the prisoners' awareness into their own patterns of use.
- There is often a large amount of energy in cocaine users once they have recovered from the initial chaos of using. This energy needs to be directed whilst in the prison setting and also on release.
- Prisons, where the intake is from a high crack or cocaine using area, may want to look at designating a CARAT worker as crack/cocaine specific (as in the case of H.M.P.'s Wormwood Scrubs, Holloway, Brixton and Wandsworth) to help maximise prisoner response to services.

PRISON AWARENESS TIMELINE

Stage	Physical & Mental Health	Issues to be aware of	Possible Action
<p>Initial Intake: Be aware that prisoners may have only stopped using a day or so before intake. There is a possibility that they have kept quiet as there is no real need to divulge this type of use. Some prisoners may also view their time as a recovery period.</p>	<ul style="list-style-type: none"> • Due to low levels of Dopamine and Serotonin chemical depression may be present. • Physical health may be very poor due to amount of use before arrest (see health section) • Possibility of cocaine psychosis and complications with other psychiatric conditions. 	<ul style="list-style-type: none"> • Chemical depression may increase the chances of suicide or suicidal thoughts. • Many cocaine users may not have received primary health care and may have secondary addictions. • Cocaine can act as a form of self medication for some psychiatric conditions (see health section). 	<ul style="list-style-type: none"> • Increased awareness of this issue, but be careful not to overreact just because they use cocaine. • Health check-ups that pay particular attention to heart, lungs(T.B>), liver etc. Is detox needed? • Awareness of psychiatric history and how cocaine may interact with these forms of illness.
<p>Period of sentence: Prisoner should have settled into prison life and will probably not be using cocaine in prison.</p>	<ul style="list-style-type: none"> • Physical and mental health should have improved if there were no major problems to begin with. • In some cases long term issues of anxiety may be present in some prisoners. 	<ul style="list-style-type: none"> • Problem will be minimised as cravings will have disappeared and physical/mental health improving. • Anxiety issues may be compounded by the prison environment. 	<ul style="list-style-type: none"> • Awareness groups around the issues of crack and cocaine dependence can be used well at this point. • Anxiety management and raising the awareness of prisoners on this issue.
<p>Pre-release: Prisoner is coming towards the end of their sentence and is preparing for release.</p>	<ul style="list-style-type: none"> • Prisoner may become more agitated and anxious on or near the release date. Sleep patterns may be disturbed. 	<ul style="list-style-type: none"> • Cravings may now be returning. Using dreams may occur and feel very real to the prisoner. • Prisoner may be starting to plan (unconsciously in some cases) their next use of the drug. 	<ul style="list-style-type: none"> • Inform prisoner of why dreams feel so real/educate regarding cocaine cravings. • Good harm minimisation information especially if cocaine was injected or combined with heroin.

ANNEX E: STUDY OF SERVICE PROVISION NEEDS OF PSYCHOSTIMULANT USERS

EXECUTIVE SUMMARY

Methods

This qualitative study was conducted by the Scottish Drugs Forum (SDF) on behalf of the Psycho-Stimulant Working Group of SACDM in the spring of 2002. The key purpose of the study was to obtain a snapshot of the views of stimulant users about service provision. Different groups of stimulant users were included: primary opiate users, primary stimulant users and recreational stimulant users. The methods used were one-to-one interviews and focus groups. The study focused on three psycho-stimulants: cocaine, crack cocaine and amphetamine.

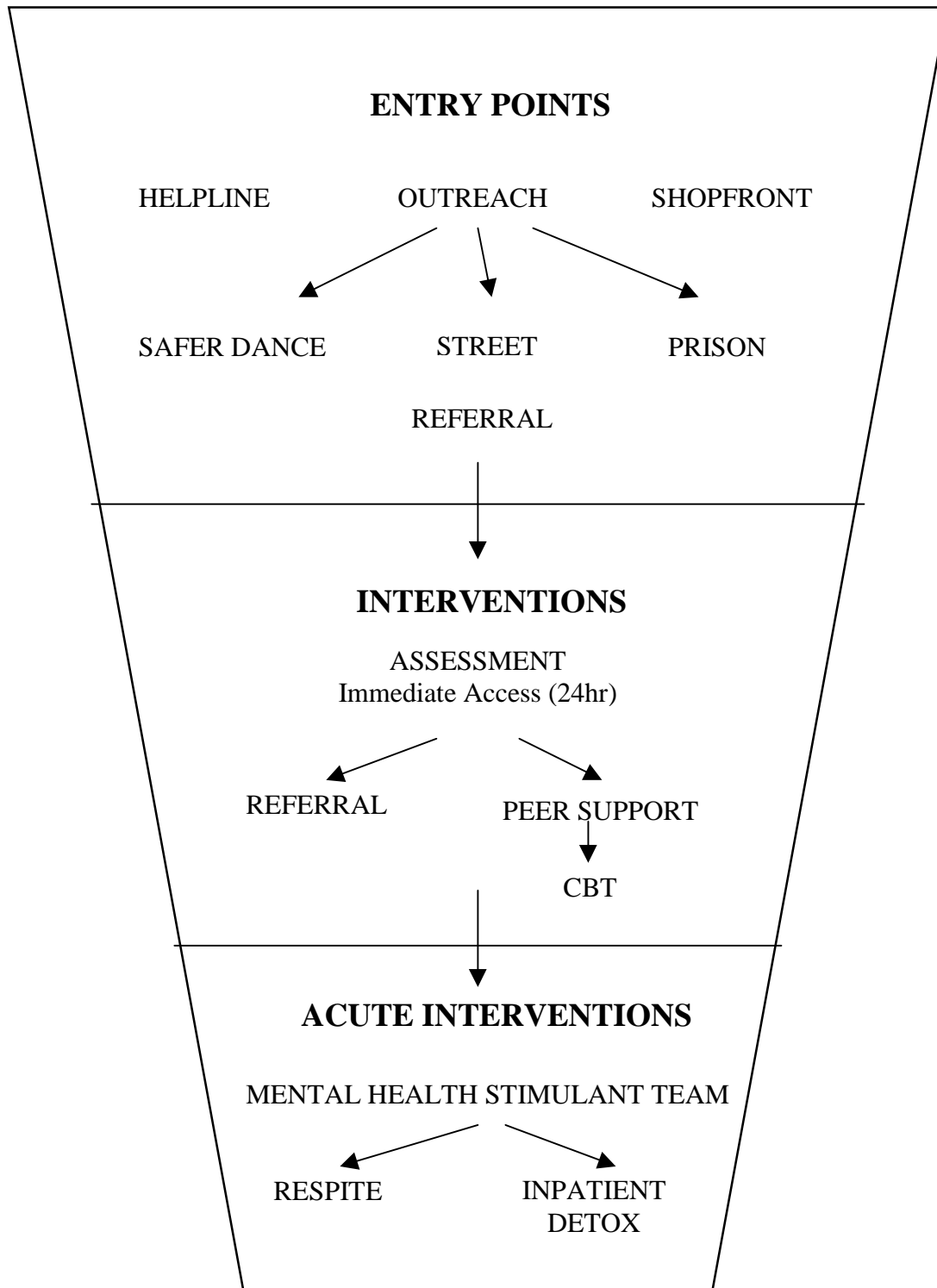
Findings

- Stimulant users are not a homogenous group.
- There is an information and training deficit among professional health and specialist drug agency workers.
- Drug services are primarily geared toward opiate use.
- Stimulant users are disinclined to discuss drug use with GPs due to GPs lack of knowledge stimulants. (Among primary opiate users, the withdrawal of their methadone script was a concern.)
- Alternative therapies were positively regarded by respondents as a treatment option for stimulant users experiencing problems.
- Respondents expressed a need for employment skills and help finding work as well as some form of aftercare service.
- Many drug users state a preference for drug agency workers who have personal experience of drug misuse.
- Respondents expressed a desire for counselling to explore the reasons behind their drug use.

Recommendations

- There should be different approaches to care which recognise the diversity of users.
- Short-term prescribing of dexamphetamine may be helpful to keep users off the streets.
- Drug agency workers and health care professionals need more information and training about stimulants.
- There is a need for improved co-ordination between services.
- There is a need for early access to confidential, trustworthy advice and information without recourse to a GP.
- The present variety of treatment approaches should be encouraged.
- Employment support and aftercare/recovery services are needed.
- Ex-users should be involved in delivering services.

ANNEX F: A MODEL OF SERVICE DELIVERY FOR PSYCHOSTIMULANT DRUG USERS



OUTLINE STRUCTURE

SECTION 1 INTRODUCTION AND BACKGROUND

Role of the SACDM Working Group (PSWG) – to identify for SACDM the issues around cocaine, crack cocaine and amphetamine use in Scotland; to look at the available evidence on best practice in prevention and service provision; and to make recommendations to SACDM.

The purpose of the guide is to set out current knowledge on psychostimulant use in Scotland drawing on the work undertaken by the PSWG.

Define ‘psychostimulant’. For the purposes of the PSWG cocaine, crack cocaine and amphetamines were included in the exercise. Ecstasy was excluded. The Group’s definition of psychostimulants will be used throughout the guide.

Description of the exercises undertaken by the PSWG that feed into the guide and a list of group members and invited speakers.

SECTION 2 WHAT ARE PSYCHOSTIMULANTS?

Cocaine (coke, charlie, snow) – white powder obtained from the leaves of the coca plant; powerful stimulant effects; snorting common, soluble cocaine sometimes injected; effects of snorted cocaine peak in 15-30 minutes

Crack cocaine (rock) – form of freebase cocaine that is purer and more concentrated; usually smoked and absorbed into the body faster than cocaine.

Amphetamine (speed, whizz) – speeds up the way your body works, usually for 4-6 hours; user feels more energetic, confident; amphetamine sulphate most common; can be snorted, dabbed from finger to mouth or injected. Smoking is not common.

SECTION 3 WHO USES PSYCHOSTIMULANTS?

Socio-demographic profile of users from research studies (age, gender, employment status etc); differentiate between opiate users (also using psychostimulants) and primary psychostimulant users; include data from Piper on primary psychostimulant users; include data from NTORs on both primary and secondary psychostimulant users.

Present summary of Scottish data from ISD / HEPs / SDEA with the appropriate caveats – drawing on work prepared by Paul and Sally for SACDM report; highlight lack of comprehensive source of information.

SECTION 4 NATURE OF PROBLEMS FACED BY USERS (including user's views)

Psychological problems – research studies illustrating psychiatric morbidity associated with psychostimulant use including anxiety, agitation, insomnia, depression; psychiatric symptoms found in 40% of stimulant users.

Physical health problems – information from research studies including heart disorders, overdose, cerebrovascular accidents, convulsions, seizures etc; issues for injectors (HIV / Hepatitis); mortality associated with accidents

Social problems – information from research studies including family breakdown, breakdown of other social relationships, associated criminal behaviour (property crime, violent crime), homelessness.

Users' views on the nature of the problems faced elicited in the course of the focus group work being conducted by SDF.

SECTION 5 TREATMENT / SERVICE PROVISION (including user's views)

Pharmacological treatment for cocaine users; research from the United States; lack of evidence to support any one treatment; focus on medications which relieve withdrawal rather than substitute; controlled trials on desipramine; systematic reviews of carbazepine; controlled trials of the clinical use of anti-depressants.

Pharmacological treatment for amphetamine users; evidence limited; limited benefits of fluoxetine, amlodipine, imipramine, desipramine; studies on dexamphetamine; controlled trial of dexamphetamine substitution underway at two centres funded by Department of Health

Psychological / psycho-social approaches; range of approaches have been tried (including CBT, relapse prevention, peer support etc), sometimes stand alone and sometimes in conjunction with symptomatic medication; number of studies currently underway including a brief intervention model for young injecting stimulant users.

Complimentary therapies; different approaches including acupuncture have been tried; discussion of the role of these therapies as an adjunct to other treatments; briefly describe results of research studies including their possible role of retaining clients in treatment.

Models of service provision; describe and highlight examples / case studies of how services for psychostimulants have been designed and delivered

Users' views on how services should be designed and delivered to best serve the needs of psychostimulant users; data from research studies and from SDF focus group work in Scotland.

SECTION 6 SUMMARY OF KEY FINDINGS

Succinct, bullet-pointed section highlighting key findings from the PSWG materials used in the guide.

SECTION 7 REFERENCE MATERIALS / INFORMATION SOURCES

Materials referenced in the text

Further information sources (see below)

Cocaine / Crack

Drug Scope

www.drugscope.org.uk/druginfo/drugsearch/ds_results.asp?file=\wip\11\1\1\cocaine_crack.html

Drugfax (Scottish Drugs Forum) - section 5.

NIDA (USA) www.nida.nih.gov/Infofax/cocaine.html

Cocaine Anonymous www.cauk.org.uk

Medline Plus www.nlm.nih.gov/medlineplus/cocaineabuse.html

Amphetamines

Drugscope www.drugscope.org.uk/druginfo/drugsearch/ds_results.asp?file=\wip\11\1\1\amphetamines.html

Medline Plus www.nlm.nih.gov/medlineplus/amphetamineabuse.html

GLOSSARY

Street Name/Term	Definition
Amph	Amphetamine Sulphate
Base	Cocaine hydrochloride / Amphetamine
Brown and White	The simultaneous supply of a bag of heroin with one of cocaine or crack
Charlie	Cocaine hydrochloride
Coke	Cocaine
Crack	Cocaine hydrochloride "washed" and then baked into rocks using sodium bicarbonate (Crack is thought to be less clean than most freebase due to the bicarbonate being less efficient at cleaning the cocaine of impurities)
Crystal	Methamphetamine. "crystals " may be used to describe amphetamine
Flake	Cocaine hydrochloride
Freebase	Cocaine hydrochloride "washed" (mixed and then dried or baked) in ether or ammonia
Freebasing	Converting cocaine hydrochloride to base followed by vaporisation then inhalation
Hot ice	Smokeable amphetamine
House fee	Fee paid to enter a crack house
House piece	Crack given to the owner of a crack house or apartment where crack users congregate
Ice	Methamphetamine, also methadone
Inhale	Breathe in
Inhalation	The method of applying drugs in a finely divided or gaseous state so that on being breathed in, they may come in contact with the nose throat or lungs

Street Name/Term	Definition
Line	Powdered cocaine hydrochloride or amphetamine sulphate powder laid out in a line ready to snort
Lung	Flexible plastic smoking apparatus which when squeezed enables smoke held within it to be forcibly ejected. Often comprises an adapted plastic coca cola bottle
Meth	methamphetamine; methadone
Neuropsychological	The study of the relationship between the brain and behaviour. Ability to diagnose specific cognitive and behavioural deficits and to prescribe rehabilitation strategies for their recovery
Neurotoxins	Toxins that act specifically on nervous tissue
Nuggets	Cocaine
Rock	Freebase cocaine
Run	Repeated administration of an intoxicating substance several times in a short space of time. Common with cocaine, crack/freebase
Snorting	The inhalation of dry powdered drug into the nose
Snow	Cocaine
Speed	Amphetamine sulphate
Speedball/snowball	Mixed injection of cocaine and heroin
Stinkers	Ammonia or ether used to "wash" freebase cocaine
Sulph	Amphetamine sulphate

Street Name/Term	Definition
Upper	Any stimulant drug – usually amphetamines
Wash/wash out	Process of obtaining cocaine base from cocaine hydrochloride
White	Cocaine
Whizz	Amphetamine

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FURTHER RESOURCES

Integrated Models of Care for Substance Misuse Treatment, Scottish Executive Effective Interventions Unit, to be published later in 2002 (www.drugmisuse.isdscotland.org/)

National Treatment Agency initiatives, particularly the *Models of Care Guidance* (2001) (www.nta.nhs.uk/)

COCA *Guidelines for Projects and Purchaser* (www.coca.org.uk/)

National Occupational Standards, Skills for Health (office @skills for health.org.uk)

Drug Notes 5 Cocaine and Crack, DrugScope, London (www.drugscope.org.uk/)

Drug Notes 4 Amphetamines, DrugScope, London (www.drugscope.org.uk/)

Drugfax: A Guide for those who provide information, help or advice to people with drug problems Scottish Drugs Forum, Glasgow (5th Edition 2002) (enquiries@sdf.org.uk)

National Care Standards Care Homes for People with Drug and Alcohol Misuse Problems, Scottish Executive (2002) (www.scotland.gov.uk/library3/social/csda-00.asp)

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