



European Monitoring Centre  
for Drugs and Drug Addiction

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# ANALYSIS EUROPE 2006

THE STATE OF THE DRUGS PROBLEM IN EUROPE





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## Contents

Foreword	5
Acknowledgements	7
Introductory note	9
Commentary — the drug problem in Europe	11
Chapter 1	
<b>Policies and laws</b>	<b>17</b>
Chapter 2	
<b>Responding to drug problems in Europe — an overview</b>	<b>27</b>
Chapter 3	
<b>Cannabis</b>	<b>37</b>
Chapter 4	
<b>Amphetamines, ecstasy and other psychotropic drugs</b>	<b>47</b>
Chapter 5	
<b>Cocaine and crack cocaine</b>	<b>58</b>
Chapter 6	
<b>Opioid use and drug injection</b>	<b>66</b>
Chapter 7	
<b>Drug-related infectious diseases and drug-related deaths</b>	<b>75</b>
Chapter 8	
<b>Improving the monitoring of problem consumption and multiple drug consumption</b>	<b>88</b>
References	95



## Foreword

This is the 11th annual report of the European Monitoring Centre for Drugs and Drug Addiction, available this year in 23 European languages. Looking back across the reports issued by the agency over the years, it is hard not to be struck by the growth in the level of detail in the information now available — reflecting a more complex situation both in the use of illicit drugs in Europe and in the way Europe responds to the drug problem.

The information available to support our analysis has grown considerably. This year's report is based on data from the 25 EU Member States and Norway and, where available, from Bulgaria, Romania and Turkey. Not only has the number of countries providing information increased, but the amount of comparable information available from each has continued to grow. This information provides us with a far more detailed picture of the European drug situation and its dynamics than ever before. It is the EMCDDA's task to explore this complexity, drawing together common experiences where they exist as well as commenting on differences. In investing in data collection and collaborating in the work of the centre, our Member States have come to understand that their neighbours' problems today may become their own problems tomorrow. This awareness is evidenced in the new European Union drug strategy and its accompanying action plans, which are underpinned by consensus on the importance of collecting and sharing information; the need to identify and disseminate good practice; and the value of cooperation and coordinated action in response to the common threat to the health, well-being and security of our citizens posed by drugs.

A reflection on the information available also reminds us of the need for continued vigilance and of the dangers of complacency. Warning notes are sounded in this report in respect of drug-related HIV infections and drug-related deaths. Nonetheless, in Europe as a whole, a tremendous effort has been made to address these sorts of problems,

and tangible progress has been made. This has meant that European policymakers have had to make difficult choices, and they have largely done so after carefully studying the available evidence. Such a policy perspective should be applauded. The global debate on the drug problem is not short on rhetoric regarding the need for a balanced and evidence-based approach. In Europe, perhaps more than anywhere else, this rhetoric has become reality. Despite differences between our Member States in the details of the drug problems they each face and in their priorities for action, there is common agreement on the importance of sharing information and cooperating in order to reduce the supply of drugs as well as on the need to balance supply reduction activities with demand reduction measures, and there is a growing consensus regarding the need to be guided by the evidence in making hard choices about what programmes and actions are in the best interests of our citizens. This European approach is manifested not only in the new European drug strategy, but also in the national drug strategies that our Member States have adopted, in the stronger and more unified voice that emerges from Europe on this issue, and in the work of the EMCDDA as we strive to play our part in facilitating informed policymaking by providing an unbiased and scientifically rigorous analysis of the information available on the drug phenomenon in Europe.

Drug use is a complex issue, and it is not one that lends itself to simple conclusions. However, one conclusion does clearly emerge from the European experience — we have learned that working together not only works but is also indispensable if we are to develop effective responses to the challenges presented to us by the use of illicit drugs.

**Marcel Reimen**

Chairman, EMCDDA Management Board

**Wolfgang Götz**

Director, EMCDDA





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### Reitox national focal points

Reitox is the European information network on drugs and drug addiction. The network is comprised of national focal points in the EU Member States, Norway, the candidate countries and at the European Commission. Under the responsibility of their governments, the focal points are the national authorities providing drug information to the EMCDDA.

The contact details of the national focal points may be found at:  
<http://www.emcdda.europa.eu/?nnodeid=1596>



## Introductory note

This annual report is based on information provided to the EMCDDA by the EU Member States and candidate countries and Norway (participating in the work of the EMCDDA since 2001) in the form of a national report. The statistical data reported here relate to the year 2004 (or the last year available). Graphics and tables in this report may reflect a subset of EU countries: the selection is made on the basis of those countries from which data are available for the period of interest.

An online version of the annual report is available in 23 languages and may be found at <http://annualreport.emcdda.europa.eu>

The 2006 statistical bulletin (<http://stats06.emcdda.europa.eu>) presents the full set of source tables on which the statistical analysis in the annual report is based. It also provides further details on the methodology used and over 100 additional statistical graphs.

Country data profiles (<http://datapfiles06.emcdda.europa.eu>) provide a top-level, graphical summary of key aspects of the drug situation for each country.

Three in-depth reviews accompany this report and explore the following issues:

- European drug policies: extended beyond illicit drugs?
- A gender perspective on drug use and responding to drug problems
- Developments in drug use within recreational settings

The selected issues are available in print and online (<http://issues06.emcdda.europa.eu>) in English only.

The national reports of the Reitox focal points give a detailed description and analysis of the drug problem in each country and are available on the EMCDDA website (<http://www.emcdda.europa.eu/?nnodeid=435>).



## Commentary — the drug problem in Europe

### A new European framework for coordination and cooperation

Although defining national drug policies remains the prerogative of individual European Member States, there is now strong agreement on the benefits that can accrue from working together at the European level. This can be seen in a number of recent developments that support coordination and cooperation activities. Among these developments are the coming into force in 2005 of two new EC regulations on precursors and a Council decision on new drugs. In addition, measures against drug trafficking are strengthened by new legal instruments to address money laundering and confiscation of assets. However, the development that is most central to shaping European collaboration and future actions on the drug issue is the new EU drug strategy for 2005–12 and its two accompanying action plans. In the first of these, around 100 planned specific actions are detailed by EU Member States to be implemented by 2008. A continuous programme of evaluation is envisaged for the strategy, with annual progress reviews and impact assessments at the end of each of the two action plan periods.

The strategy can be seen as representing a European consensus on how the drug problem should be addressed. There is an explicit commitment to a balanced approach combining both supply- and demand-side measures, matched by an acceptance of the need to base actions on the evidence of effectiveness and, furthermore, to systematically evaluate progress. Important policy differences between European Member States still exist, often reflecting differences in the national drug situations and in the configuration of responses. Nonetheless, the new drug strategy suggests that the European policy debate on drugs is increasingly characterised by agreement on a common framework for activities. For example, virtually all demand reduction strategies include prevention, treatment and harm reduction elements, although the emphasis on each varies between Member States. Some policy options continue to generate considerable debate — but in general this is against a background of broad agreement on the fundamentals that underpin the European response to the drug problem.

### Drug use and drug supply: a distinction increasingly made

A continuing trend, again evident in the new information reported this year, is for changes to national drug laws to emphasise more strongly a distinction between offences of drug possession for personal use and those involving trafficking and supply. Generally, there is a shift towards increased penalties for the latter and a reduced emphasis on custodial sentences for the former. This development is in line with a greater emphasis overall across Europe on widening the opportunities for drug treatment and on giving more attention to interventions that divert those with drug problems away from the criminal justice system towards treatment and rehabilitation options. For those countries that have made a legal distinction with respect to the possession of drugs for use rather than supply, the question arises whether there is an explicit need to legislate on what quantities of drugs constitute a threshold for personal use. Here no consensus currently prevails and different approaches have been adopted across Europe, ranging from the issuing of general operational guidelines through to specification of legal limits.

### Heroin use: an important part of a bigger picture

Data presented in this report show that across Europe as a whole the historical focus on heroin use and injecting as the central elements of the drug problem needs to be widened because of the increasing importance of polydrug use and stimulant use and the growing public health implications of widespread cannabis use. Nevertheless, in many countries opioids (largely heroin) remain the principal drugs for which clients seek treatment, accounting for about 60 % of all recorded treatment requests in 2004 — and among these clients just over half (53 %) reported injecting the drug.

Nearly 25 % of opioid treatment demands are made by individuals aged 35 years or more, with only 7 % of clients seeking treatment for the first time being aged under 20. It should be noted that treatment demand data reflect the number of clients requesting treatment during the reported year and do not include people continuing in treatment; consequently the total number of clients in treatment is considerably higher. Across Europe as a whole, the substantial growth in drug substitution treatment that has occurred in recent years means that the treatment system

includes an increasing, and ageing, population of people with heroin problems, who are likely to require care and remain major consumers of resources for many years to come.

Heroin consumed in Europe is manufactured predominantly in Afghanistan. Europe continues to account for the greatest quantities of heroin seized worldwide, and, as a result of an increase in seizures in south-eastern European countries (particularly Turkey), this region has surpassed western and central Europe in terms of volume intercepted. This rising trend in heroin seizures not only underlines the value of coordinated action against trafficking at the wider European level but also raises important questions about the impact of increased heroin production on the European market. No clear trends are visible with respect to average purity; however, the five-year price trend (1999–2004) corrected for inflation is downwards in most countries. Nevertheless, although heroin is more readily available and cheaper in Europe, there is no evidence yet that this is influencing overall levels of consumption. Overall indicators would suggest that the incidence of new heroin use is still declining in Europe within what is probably a stable situation — with a significant proportion of those with opioid problems now receiving substitution treatment, at least in some countries. Among those new to treatment, the numbers with a primary opioid problem have been decreasing in most countries. Nonetheless, this is an area where waves of epidemic use have been seen in the past, and therefore complacency must be avoided.

In this year's report, there are worrying indicators that the number of drug-related deaths, which has generally declined since 2000, increased slightly in a majority of countries in 2004. It is too early to judge whether these small changes herald a long-term shift, but it must be remembered that drug-related deaths represent one of the major public health consequences of illicit drug use. Even though the proportion of drug-related deaths occurring in young people has been falling, supporting suggestions that new heroin injecting is declining, available city-based estimates of drug-related mortality (overdose and other causes) suggest that currently 10–23 % of overall mortality among adults aged 15–49 can be attributed to opioid use.

### **Injecting and injecting-related health problems: a constant companion**

In many countries, drug injecting is almost synonymous with heroin use, but there are exceptions, with a few EU countries reporting significant levels of stimulant injecting, mostly among heavy users of amphetamines. Mirroring to some extent the picture for heroin, overall the information

available suggests a general decrease in drug injection over the longer term. However, in many of the new Member States injecting rates remain high. An important caveat here is that the availability of national or subnational estimates of drug injecting is poor. Moreover, studies of injecting in some regions have even reported slight increases recently. The most comprehensive picture of this behaviour comes from monitoring heroin users in treatment, among whom the proportion of injectors has declined dramatically in some countries, but not in others. Notably, among the old Member States, Denmark, Greece, Spain, France, Italy and the United Kingdom all report declining rates of injecting among heroin users in treatment.

The relationship between drug injecting and health problems is well known, and drug injectors have a high risk of overdose and serious infection as well as other health problems such as septicaemia and thrombosis. HIV infection is the health risk that has galvanised the European public health response to this form of drug use, and almost all countries now have interventions aimed at preventing new infections. For example, needle and syringe provision, once regarded as a controversial intervention, is available to some degree in virtually all Member States, although the coverage varies considerably between countries. Most countries report low rates of newly diagnosed HIV infection attributable to drug injecting, and HIV infection rates among injectors are estimated to be below 5 %. However, again important caveats should be borne in mind: first, two of the largest countries most affected by AIDS among drug injectors, Spain and Italy, currently do not provide national HIV case reporting data; and, second, it is reported that HIV transmission is continuing to occur in specific injecting groups across Europe, and there are even signs of increases in some of the population groups studied.

A far more negative picture presents itself for rates of infection with the hepatitis C virus (HCV), which remain almost universally high among drug injectors. Treating the HCV-related health problems among drug injectors and ex-injectors is likely to remain a major health cost for many years to come. In drawing the conclusion that drug injecting may be slowly declining and that Europe has responded well to the challenge posed by the epidemic spread of HIV in the 1990s, there is a real danger that this may lead to complacency about the health threats still posed by this behaviour. High levels of endemic HCV infection, continued transmission among drug injectors, with increased incidence observed in some groups, and a large high-risk group of injectors in some of the new Member States all speak of the need to continue to regard drug injection, and its associated health problems, as a major public health issue in Europe and a critical area for drug policy and research vigilance.

## At a glance — estimates of drug use in Europe

(Note that these estimates relate to the adult population and are the most recent estimates available. For complete data and full methodological notes see the accompanying statistical bulletin.)

### Cannabis

Lifetime prevalence: at least 65 million, or one in five European adults  
 Last year use: 22.5 million European adults or one third of lifetime users  
 Use in the past 30 days: 12 million Europeans  
 Country variation in last year use:  
     Overall range 0.8 % to 11.3 %  
     Typical range 2.8 % to 7.5 % (15 countries)

### Cocaine

Lifetime prevalence: at least 10 million, or over 3 % of European adults  
 Last year use: 3.5 million European adults or one third of lifetime users  
 Use in the past 30 days: over 1.5 million  
 Country variation in last year use:  
     Overall range 0.1 % to 2.7 %  
     Typical range 0.3 % to 1.2 % (18 countries)

### Ecstasy

Lifetime prevalence: about 8.5 million European adults  
 Last year use: 3 million or one third of lifetime users  
 Use in the past 30 days: more than 1 million  
 Country variation in last year use:  
     Overall range 0.0 % to 3.5 %  
     Typical range 0.3 % to 1.5 % (15 countries)

### Amphetamines

Lifetime prevalence: almost 10 million or around 3 % of European adults  
 Last year use: 2 million, one fifth of lifetime users  
 Use in the past 30 days: less than 1 million  
 Country variation in last year use:  
     Overall range 0.0 % to 1.4 %  
     Typical range 0.2 % to 1.1 % (16 countries)

### Opioids

Problem opioid use: between 1 and 8 cases per 1 000 adult population (aged 15–64)  
 Almost 7 000 acute drug deaths, with opioids being found in around 70 % of them (2003 data)  
 Principal drug in about 60 % of all drug treatment requests  
 More than half a million opioid users received substitution treatment in 2003

## Cocaine: signs of stability for Europe's second most common illicit drug

Estimates of cocaine use (last year prevalence) now place the drug slightly ahead of amphetamine and ecstasy as Europe's second most used illicit drug. However, the general picture is one of stabilisation in levels of use after a period in which users of the drug increased considerably in number. The large increases in cocaine prevalence experienced by Spain and the United Kingdom from the mid to late 1990s seem to have stabilised since 2000 or 2001. Elsewhere, while some moderate increases in levels of cocaine use have been noted in a few countries, dramatic increases are not being reported. Overall, the cocaine situation remains very heterogeneous in Europe and significant cocaine use is restricted to a few, mainly western European, countries.

It would be wrong to conclude that the signs of stabilisation in use of cocaine will necessarily result in a stabilisation in the extent of problems attributed to use of this drug. In Europe, cocaine use is at historically high levels, and studies suggest that it is a common pattern for increases in problems relating to a drug to lag some years behind increases in prevalence. This is because it takes time for intensive and regular patterns of drug use to develop and for problems to become visible. This may be beginning to happen in those European countries where cocaine use is now well established. In both the Netherlands and Spain, at least one in four treatment demands is now reported to be cocaine related, and overall in Europe new treatment demands for cocaine roughly doubled between 1999 and 2004. Although the use of crack cocaine remains very limited in Europe, reports of problems from some cities suggest that the situation may be deteriorating.

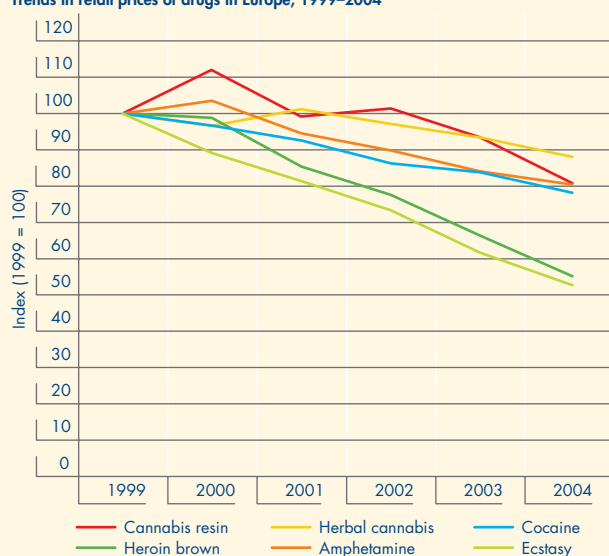
Cocaine is often found in the toxicological analysis of deaths attributed to opioid drugs, and in a number of countries concurrent cocaine use has become a recognised problem for those treating heroin problems. Although data are limited, in the 2005 national reports over 400 deaths were identified as being causally related to cocaine use, and cocaine-related deaths appeared to be increasing in all high-prevalence countries. This figure is almost certainly an underestimate and the impact of cocaine use as a contributor to deaths due to cardiovascular problems remains unknown. The message is clear: if Europe is to avoid experiencing an increase in the public health costs associated with the use of this drug, any stabilisation in overall use of cocaine should not mask the need for both a better identification and understanding of cocaine-related problems and the need for investment in the development of effective responses.

## Drug use in Europe cheaper than ever before

In this report, for the first time, a five-year analysis of the street prices of illicit drugs is included, corrected for inflation to allow a more accurate assessment of changes in the street price of illicit drugs over time. Data on street prices are difficult both to collect and to interpret. The purity, quantity and variety of the substance bought all influence price, as do geographical factors such as living in a big city or on a regular drug transit route. Drug prices also vary considerably between countries and are subject to fluctuations over time that reflect disruptions in supply. Despite these distortions in the data, across most drug types the available

data suggest that in Europe as a whole the cost of buying drugs has fallen. For most countries, the predominant five-year trend has been a decline in street price for cannabis, heroin, amphetamine, ecstasy and cocaine (see graphic below). Although historical data on street prices are largely lacking and difficult to interpret when available, worryingly this recent trend accords with the suggestion that prices may have been declining over the longer term. For example, information available from some of the high-prevalence countries suggests that cocaine and ecstasy were considerably more expensive in the late 1980s and early 1990s than they are today.

Trends in retail prices of drugs in Europe, 1999–2004



NB: The trends represent the available information on national street-level prices for each drug in the EU Member States and Norway, weighted by country population sizes to form an overall European trend. Prices have been adjusted for national inflation rates (base year 1999) and all series indexed to a base of 100 in 1999.

Many countries cannot supply these data, which are difficult to obtain and often unreliable and incomplete. Countries missing drug price information for two or more consecutive years are not included in the trend calculations for the drug: the trend for heroin brown is based on 9 countries, amphetamine on 9, cocaine on 13, ecstasy on 13, herbal cannabis on 13, and cannabis resin on 14.

Additionally, where 2004 data are missing (11 cases) 2003 prices are used; for missing 1999 data (1 case) 2000 prices are used; data missing for other years (12 cases) have been interpolated from adjacent years.

For further details on 2004 prices, see Tables PPP-1 to PPP-4 in the 2006 statistical bulletin.

Sources: Price data: Reitox national focal points.

Inflation and population data: <http://epp.eurostat.ec.europa.eu/>

## Responding to a more complex European drug problem

A common theme running through this report is the increasing need to develop responses that are sensitive to the complex and multifaceted nature of today's drug problem. When prevention, treatment or harm reduction activities are considered, there is a need to better understand what constitutes good practice and evidence-based action. Among the total of approximately 380 000 treatment demands reported in 2004, cannabis was the primary reason for referral to treatment in about 15 % of all cases, making it the next most commonly reported drug after heroin. Treatment services are also dealing with more stimulant and polydrug problems, including a considerable overlap of illicit drug and alcohol problems. However, at the population level we do not know enough about the public health implications of regular and persistent use of these types of drugs, nor about the likely intervention needs of those who use them. The evidence base in Europe for determining the response to drug problems is strongest for responding to the problem of illicit opioid use, where a considerable body of evidence supports the development and targeting of services. The growing consensus that exists to guide policy on what is likely to constitute

appropriate intervention for problem heroin use is matched by a growing need to develop the same clarity on how we respond to a more heterogeneous European drug problem.

## The need better to define and understand polydrug use

A key issue is the need to respond to problems caused by the use of multiple psychoactive substances. Polydrug use is becoming increasingly recognised as a key area for service development. However, definition of the concept remains elusive, and in some respects nearly all those who use drugs can be considered polydrug users. Polydrug use also poses considerable challenges to drug monitoring systems, which tend to be based on behavioural measures of the use of an individual index drug. There is therefore a critical need to develop a better conceptual framework for describing different types of polydrug use as a first step to understanding the implications of this behaviour. This year's report devotes space to presenting the analytical issues that must be addressed if Europe is to meet the challenge of better understanding the needs of the increasing number of individuals whose problems stem from the use of a range of drugs rather than a dependency on a single substance.



### Back to the future: anticipating threats and challenges

In this year's report, as always, an attempt is made to identify emerging trends to anticipate future problems. Such analysis is by definition speculative and must be made with caution. A drug clearly associated with severe public health problems is methamphetamine. While globally methamphetamine problems continue to grow, within Europe the drug remains restricted to a few countries with long-established problems. Although the available information does not permit us to draw any firm conclusion on trends, more countries are reporting seizures or use of the drug, clearly emphasising the need for more intensive monitoring of those population groups most at risk.

In 2006, the EMCDDA published a technical paper on hallucinogenic mushrooms, and this issue is again summarised in our annual reporting. The availability and use of hallucinogenic mushrooms appears to have been increasing since the late 1990s but to a large extent has passed unnoticed. For the most part, use of this type of drug appears to be experimental and reports of problems remain rare. However, a growing awareness among policymakers of the availability of hallucinogenic mushrooms has led to the introduction of some actions to increase control measures.

Psilocybin and psilocin, two of the psychoactive substances found in hallucinogenic mushrooms, are controlled by an international convention. However, the fact that mushrooms grow naturally in many countries poses a more complex issue for legislation, and they are treated differently across Europe. More generally, vigilance on emerging substances that may pose a threat to public health and therefore require control is supported by a new Council decision (2005/387/JHA) on information exchange, risk assessment and control of new psychoactive substances. An example of the need for early-warning information in this area has been the rapid spread of mCPP (1-3-chlorophenyl piperazine) in 2005. The emergence of mCPP illustrates the fact that those involved in the production of illicit drugs are constantly looking for innovation in the form of new chemicals that can be introduced to the market — in this case probably to potentiate or modify the effects of MDMA (ecstasy). Such innovation requires a response as the potential for these substances to cause severe health problems is unknown. The early-warning system put in place by the Council decision therefore represents an important mechanism to intervene in a process in which the health of young Europeans is put at risk by those who pursue profit by avoiding existing drug control mechanisms.



## Chapter 1

### Policies and laws

#### National drug strategies

During the reporting period, national drug strategies and action plans were adopted by five countries (Table 1). Latvia adopted a national drug strategy for the first time, for the period 2005–08, while new national drug strategies and plans were adopted in the Czech Republic, Spain, Luxembourg and Romania.

In addition, Finland adopted a drug strategy for the prison administration (2005–06), and in the United Kingdom public service agreements (PSAs) set out new objectives and targets in the field of drug policy aimed at reducing the harm caused by illegal drugs to individuals, their families and the community.

During the reporting period, national drug strategies were under preparation in Italy, Austria, Poland, Portugal, Sweden and Norway (Table 2).

Some countries, having first implemented national drug strategies and action plans some time ago (1998 onwards), are now reformulating their strategies or plans, placing greater emphasis on setting clearer and more feasible objectives. For example, Luxembourg reports that its new action plan 2005–09 is simple, clearly structured and output oriented, setting objectives for actions, identifying responsibilities and specifying budgets, anticipated outcomes and deadlines for outcome and evaluation. In Belgium, an expert group was appointed by the public health authorities of the French Community and the Walloon Region to establish a ‘concerted plan of prevention, help and care in drug addiction’. The

**Table 1: Countries adopting new drug strategies in 2005**

Country	Document	Time span
Czech Republic	National drug strategy Action plan	2005–09 2005–06
Spain	Action plan	2005–08
Latvia	National drug strategy	2005–08
Luxembourg	National strategy and drug action plan	2005–09
Romania	National drug strategy	2005–12

**Table 2: Countries with drug strategies in preparation in 2005**

Country	Document	Time span
Italy	Action plan	2004–08
Austria	National strategy	
Portugal	National strategic plan and action plan	2005–08
Sweden	Action plan	
Norway	Action plan	

group recommended that ‘priorities and objectives should be defined more clearly by the governments’, that ‘a clear definition of the basic principles of a common drug policy should take place’ and that ‘a chronology of the chosen strategies should be identified’. The 2005–06 action plan in the Czech Republic follows a similar direction, specifying concrete goals and the activities needed to meet them, and setting out the responsibilities of individual ministers and the terms and indicators of fulfilment for each field.

#### Evaluation of national drug strategies

Many European countries automatically renew their national drug strategies, setting in motion a cyclical process in which the results of the previous strategy, or its evaluation, provide input for the future strategy (EMCDDA, 2004a).

During 2005, such a process was reported by Ireland, Luxembourg, Hungary and Romania. Evaluation of the implementation of the Hungarian strategy to combat the drug problem was undertaken externally by the Dutch Trimbos Institute, the first time that a country’s drug strategy has been assessed by foreign experts. The evaluation focused on the mid-term results of the drug strategy and led to a set of recommendations regarding future drug strategies and how the coordination structure in the field of drug policy could be strengthened. There are similarities with the 2004 evaluation of the 1999 Portuguese national drug strategy and the 2001–04 action plan, conducted externally by the Portuguese National Institute for Public Administration and internally by the Institute for Drugs and Addiction (IDT).

Hungary and Portugal are the first two countries in Europe to have requested external assessment of their national drug strategies.

In 2005, the mid-term review of the Irish drug strategy 2001–08, based on a public consultation process and analysis of key national and EU data, recommended ‘refocusing’ priorities in order to address emerging trends in treatment, polydrug use, cocaine use and the spread of HIV and hepatitis C and ‘re-energising’ the roll-out and implementation of various key actions during the remaining period of the strategy. And in Romania, the national drug strategy 2003–04 was evaluated with the participation of all state institutions involved in the field of drugs with the findings forming the basis for the new national drug strategy 2005–12. In Luxembourg, 87 % of the measures set out in the 2000–04 national drug action plan have been implemented within the specified deadlines. It is reported that the measures not introduced (e.g. a heroin distribution programme) have been delayed mainly for political reasons. Actions not yet implemented have been included in the new action plan.

Furthermore, reports over the last year suggest that national drug strategies are beginning to have visible effects. While it is not yet possible to say definitively that the overall aims of reducing demand and supply have been achieved, there is no doubt that national drug strategies have reached specific and important targets.

Evaluation of the Portuguese drug strategy adopted in 1999 attributes to it an increase in the availability of drug treatment, a reduction in drug-related deaths and HIV prevalence and an increase in police reports for drug trafficking. On the other hand, it also found that there has been a fall in the age at which people first experiment with drugs and an increase in drug-related deaths linked to substances other than opioids. In Spain, the evaluation of national strategy (2003), while recognising that the objective of reducing drug use has not been realised, reveals that good results have been achieved in the areas of assistance and harm reduction, and satisfactory results have been achieved in other areas, such as research and education, international cooperation and supply reduction. In addition, the Ministry of Health and Consumers’ Affairs has approved an action plan 2005–08 to mobilise resources and implement initiatives with the aim of progressing and revitalising the national drug strategy. And, in Greece, a consequence of the national action plan 2002–06 has been an increase in the type and coverage of available treatment programmes.

In Sweden, the national action plan on drugs 2002–05 resulted in drugs moving up the political agenda at the local, regional and national level. Most municipalities in Sweden now have some form of action plan on drugs, and higher

priority is now given to coordination and cooperation between stakeholders in the field of drugs, resulting in improvements in these areas. There have also been developments in both the types and accessibility of treatment available for drug addicts. In the United Kingdom, the Audit Commission, while acknowledging progress in drug treatment, suggested that there remains room for improvement in facilities for reintegration and rehabilitation of drug users, such as housing, social care and other support services. In the future, the government’s success in achieving the aims of the drug strategy will be measured against targets set out in the PSAs, and by a drug harm index (DHI), which will assess the harms generated by problem use of any illegal drug.

Finally, evaluation is identified as a key element in the newly adopted national drug strategies. In Latvia, the Drug Control and Drug Addiction Restriction Coordination Council will evaluate the progress of implementation of the programme every year, and in Luxembourg a final external output evaluation will be undertaken in 2009.

## Drug-related public expenditure

Although expenditure is frequently measured over differing time periods, and there is no common definition of drug-related public expenditure, available estimates suggest that drug spending has increased in several countries, including the Czech Republic, Denmark, Luxembourg, Austria and Poland.

Countries reporting drug expenditure for the year 2004 included the Czech Republic (EUR 11.0 million), Spain (EUR 302 to 325 million), Cyprus (EUR 2.8 million), Poland (EUR 51 million) and Norway (EUR 46 million). Two countries reported more recent budgeted expenditure for tackling drugs: Luxembourg (EUR 6 million in 2005) and the United Kingdom (EUR 2 billion in 2004/05).

In Slovakia, it is estimated that total public expenditure in the field of drugs in 2004 was EUR 14.5 million, of which law enforcement accounted for approximately EUR 8.4 million and social and healthcare for EUR 6.1 million.

In Sweden, it is estimated that drug policy expenditure during 2002 was around EUR 0.9 billion (lower estimate EUR 0.5 billion, higher estimate EUR 1.2 billion). Comparing the 2002 estimates with figures for 1991 shows that public expenditure on drug policy has increased substantially.

In Ireland, the mid-term review of the national drug strategy, published in June 2005, recognises that ‘a measure of the expenditure is vital to gauge the cost effectiveness of the different elements of the strategy’, and work will commence shortly to estimate police expenditure. In Portugal, the Institute for Drug and Drug Addiction (IDT) is funding research to

develop and test a model to estimate the costs of drug abuse, and in Belgium a follow-up to a 2004 study on public expenditure was instituted at the end of 2005. Although sparse, these interesting data show that research on drug expenditure constitutes an increasingly important part of the policy agenda of some Member States.

## EU legal and policy developments

### Action plans

At EU level, two action plans adopted in 2005 directly or indirectly create a new frame of reference for the development of EU policy in the field of drugs for the next few years. First, having examined the Commission's proposal of February 2005, and taking fully into account the final evaluation of the EU drug strategy and EU action plan (2000–04), the Council endorsed the EU drugs action plan 2005–08 in June 2005. The new action plan follows the structure and the objectives of the EU drug strategy 2005–12 and lists around 100 specific actions to be implemented by the EU and its Member States by the end of 2008.

Evaluation forms a substantial part of the new EU drugs action plan. It is conceived as a continuous, incremental and participative process. It is continuous because the European Commission, with the support of the EMCDDA and Europol, will present annual progress reviews. The evaluation exercise will also be incremental, each annual progress review placing the results of the last year within the context of the preceding year. Finally, the process will be participative, involving an evaluation steering group whose task will be to define the methodology, output and provisional calendar. As in the evaluation of the EU action plan (2000–04), the steering group will be made up of representatives of relevant Commission departments, the EMCDDA and Europol, as well as representatives of the Member States. Consultative hearings for civil society representatives will also be organised. At the end of the 2005–08 drug action plan, and for the first time at European level, an impact assessment will be organised with a view to proposing a new action plan for the period 2009–12, which is intended to take this assessment as a starting point. A final evaluation of the strategy and of the action plans will then be carried out by the Commission in 2012.

This EU drug action plan is also a component of the action plan to implement the Hague programme, which sets objectives to be implemented in the area of freedom, security

and justice in the European Union over the period 2005–10. This action plan was presented by the Commission in May 2005 and approved by the Council in June 2005.

The EU action plan 2005–08 reflects the EU's balanced approach to the drug phenomenon, i.e. a comprehensive multidisciplinary approach that considers the issue from every angle: coordination, demand reduction, supply reduction, international cooperation, information, research and evaluation.

### Drug supply reduction

Two important activities in the EU in the field of drug supply reduction were characterised by the coming into force, on 18 August 2005, of the two EC regulations on precursors, adopted in 2004. Controls on chemical precursors are an important aspect of drug supply reduction, as these substances are indispensable in the production of drugs. Action in this area in the EU takes two forms: first, the regulation of trade in certain substances between the EU and third countries and, second, regulation within the internal market.

Adopted in 1990 to comply with the provision of Article 12 of the 1988 United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, on precursors control, the first regulation laid down measures to be taken to discourage the diversion of certain substances to the illicit manufacture of narcotic drugs and psychotropic substances <sup>(1)</sup>. It was replaced in December 2004 by a new regulation with an extended application framework aimed at countering also the manufacture of synthetic drugs <sup>(2)</sup>.

A Council directive <sup>(3)</sup> issued two years later, in 1992, completed the system and provided for corresponding arrangements within the internal market (the manufacture and the placing on the market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances), including the setting up of control measures. It has been replaced by a new regulation adopted on 11 February 2004 <sup>(4)</sup>. As a result of EU enlargement, Community legislators have decided to replace the 1992 directive with a regulation as 'each modification of that directive and its annexes would trigger national implementation measures in 25 Member States'. The new instrument establishes harmonised measures for intra-EU control and monitoring of certain substances frequently used in the illicit manufacture of narcotic drugs or psychotropic

<sup>(1)</sup> Council Regulation (EEC) No 3677/90 of 13 December 1990, OJ L 357, 20.12.1990, p. 1.

<sup>(2)</sup> Council Regulation (EC) No 111/2005 of 22 December 2004, OJ L 22, 26.1.2005, p. 1.

<sup>(3)</sup> Council Directive (EEC) No 109/92 of 14 December 1992, OJ L 370, 19.12.1992, p. 76.

<sup>(4)</sup> Regulation (EC) No 273/2004 of the European Parliament and of the Council of 11 February 2004, OJ L 47, 18.2.2004, p. 1.

substances, with a view to preventing the diversion of such substances. In particular, it obliges Member States to adopt the necessary measures to enable their competent authorities to perform their control and monitoring duties. In addition, a regulation laying down rules for implementing these two regulations came into force on 18 August 2005 <sup>(5)</sup>.

These actions in the area of precursors control complete another part of the important activities of the EU in the field of supply reduction. Utilising the new opportunities provided since the Maastricht Treaty, the EU has developed a legal framework to combat drug trafficking and to improve law enforcement cooperation. Several joint actions in this field have been adopted since 1995–96, and more recently a framework decision to harmonise minimum sanctions against drug trafficking and a decision on new psychoactive substances have been adopted (see 'Action on new drugs', p. 55).

In addition to these legal instruments, a programme for police and judicial cooperation in criminal matters has been adopted and implemented. Agis is a framework programme to help the police, other relevant agencies and the judiciary from the EU Member States and candidate countries cooperate in criminal matters in the fight against crime. Since 2003, it has helped to fund many projects. International organised drug production and trafficking and drug precursors diversion are mentioned within the areas of activities and specific topics of the 2006 Agis work programme and call for proposals (which closed in January 2006).

### Money laundering and confiscation of assets

There have also been some modifications of legal instruments in the field of money laundering and confiscation. Directive 91/308 on prevention of the use of the financial system for the purpose of money laundering <sup>(6)</sup>, adopted in 1991 on the legal basis related to the internal market and modified in 2001, attempted to harmonise legislation in this area among Member States. One of the reasons for the adoption of this directive was to avoid the possibility that the absence of European Community action against money laundering could lead Member States to adopt protectionist measures that might delay the establishment and completion of the internal market. In June 2004, the Commission proposed a new directive with the same purpose but including in addition terrorist financing. Limiting the scope of the directive to the proceeds of drug trafficking was felt to be too restrictive, and the Commission proposed widening the range of offences covered. This new directive, adopted in October 2005,

gives a precise definition of serious offences and covers the laundering of the proceeds of such offences, including financing of terrorist activities.

A framework decision on 'the confiscation of crime-related proceeds, instrumentalities and property' was also adopted by the Council on 24 February 2005. It aims to ensure that all Member States have in place effective rules governing the confiscation of instrumentalities and the proceeds of criminal offences punishable by deprivation of liberty for more than one year. EU legislation in this area existed previously but was considered insufficient. This new framework decision aims to achieve effective cross-border cooperation with regard to confiscation. The mechanism of confiscation is extended to other crime-related property when the offence was committed within the framework of a criminal organisation and when the offence is covered by one of several other EU framework decisions. Among these is Framework Decision 2004/757/JHA, which lays down minimum provisions on the constituent elements of criminal acts and penalties in the field of illicit drug trafficking. The Member States shall take the necessary measures to comply with this framework decision by 15 March 2007.

### Public health

Demand reduction is an integral part of the European balanced approach to drugs. In the context of the implementation of the programme of community action in the field of public health 2003–08, in 2005 the European Commission selected some drug-related projects for funding with the objective of 'promoting health and preventing disease through addressing health determinants across all policies and activities'. The first project to be funded in the drugs area, called EU-Dap 2, is the evaluation of the effectiveness of the EU-Dap school preventive programme, which aims to reduce tobacco, alcohol and drug use in the long term. The second project, IATPAD, aims to improve access to treatment for people with alcohol- and drug-related problems. Other horizontal projects include some aimed at drug prevention and should also be co-funded, for example 'PEER-Drive clean!', which is an innovative project targeting young persons aged between 18 and 24 years and aimed at preventing driving while under the influence of alcohol or drugs. These projects have been selected for funding and should receive co-financing on condition that the negotiation procedures with the European Commission are successful and that the grant agreement is signed <sup>(7)</sup>.

<sup>(5)</sup> Commission Regulation (EC) No 1277/2005 of 27 July 2005, OJ L 202, 3.8.2005, p. 7.

<sup>(6)</sup> Council Directive 91/308/EEC of 10 June 1991 on prevention of the use of the financial system for the purpose of money laundering, OJ L 166, 28.6.1991, pp. 77–83.

<sup>(7)</sup> For more information see the Commission's website ([http://ec.europa.eu/health/ph\\_projects/action3\\_en.htm](http://ec.europa.eu/health/ph_projects/action3_en.htm)).



## EMCDDA regulation

Finally, on 31 August 2005, the Commission adopted a new proposal for the recasting of the EMCDDA founding regulation. The new regulation is an important instrument to facilitate the work of the EMCDDA because of the new tasks it defines. In particular, it allows the EMCDDA to take account of new drug use patterns and emerging trends in polydrug use, including the combined use of licit and illicit psychoactive substances; to develop tools and instruments to help Member States and the EU to monitor and evaluate their drug policies and strategies; and to cooperate with non-EU countries such as the candidates for EU accession or the countries of the western Balkans. It also contains several changes to the Scientific Committee and the Management Board. Based on Article 152 TEC, this text must now be adopted by the Council and the European Parliament according to the co-decision procedure.

## New national laws

A few countries made major changes to their drug laws in the reporting period concerning both possession and trafficking offences and penalties.

In Romania, a new law and new penal code introduced distinctions between felonies and misdemeanours (with misdemeanours now punishable mainly by community work and day fines), between users and addicts and between low-risk and high-risk drugs. Exemption from penalty and postponing the execution of the penalty can now be applied to drug law offences. Treatment of addicts can now take place through an integrated assistance programme, overseen by a case manager. Prison sentences have been increased for offences related to providing a place for drug use, tolerating drug use in such a place, or encouraging drug use. Sentences were also increased for unlawfully administering high-risk drugs to a person and for supplying toxic chemical inhalants to a minor.

In Bulgaria, the new Narcotic Substances and Precursors Control Act was approved in June 2004. This act establishes the function of state bodies in the control of the regulatory procedures for drugs, in implementing measures against drug abuse and trafficking, and in research. A supplementary amendment removed the exemption of addicts from criminal responsibility if they were found in possession of one single dose (discussed further below).

In Slovakia, the new criminal code redefines the offences of possession of drugs for personal use and for trafficking. In

contrast to the previous offence of possession for own use (defined as no more than one dose), Section 171 creates two offences of possession for own use, depending on the number of doses (see below for details). Two new penalties can also be imposed for these offences: monitored home imprisonment or community service. Possession of more than 10 doses must be charged under Section 172, which, depending on the aggravating circumstances, provides for prison sentences ranging from four years to life. In addition, the age of criminal liability has also been lowered from 15 to 14 years.

In Lithuania, handling drugs with intent to sell them can no longer be punished by up to 90 days in police cells; this offence now attracts a significantly more severe minimum punishment, namely a prison sentence, although the minimum sentence has been reduced from five to two years. The maximum sentence for theft of a large amount of drugs or theft by an organised group has been extended to 15 years.

In Italy, recent changes in legislation (February 2006) have reclassified drugs into two main groups rather than six (all substances with no therapeutic use are grouped together, removing any notion of hard and soft drugs); defined the threshold between personal use and trafficking; revised the sanctions to include house arrest and community service; and increased access to the alternatives to prison. In addition, all drug users now have the right to choose freely the type and location of treatment they receive and the institution that certifies their drug-addicted status, services that are no longer provided exclusively by the public sector.

In the United Kingdom, the Drugs Act 2005 made a number of substantial amendments to the national legislation including clarifying the classification of fungi containing psilocin or psilocybin as a class A drug; creating the presumption of intent to supply when a specified quantity of controlled drugs is found; allowing police to test drug offenders on arrest, instead of on charge, and requiring those testing positive to undergo assessment for drug use; and requiring courts to take into account aggravating factors (such as supplying drugs near a school) when sentencing. Courts may also remand in police custody for up to eight days (previously four days) those who swallow drugs packages, and a court or jury may now draw inferences if a person refuses to allow an intimate search or scan without good reason.

In general, there is a tendency across Europe to reduce or remove custodial penalties for personal use offences and, at the same time, to increase penalties for offences related to drug supply <sup>(8)</sup>.

<sup>(8)</sup> See 2005 annual report (<http://ar2005.emcdda.europa.eu/en/page013-en.html>). See also 'Illicit drug use in the EU: legislative approaches', an EMCDDA thematic paper (<http://eldd.emcdda.europa.eu/?nnodeid=5175>).

## Quantities

Several countries legislated on threshold quantities of drugs during the reporting period.

In Belgium, following the Constitutional Court's annulment of Article 16 of the 2003 law, a new joint directive of the Minister of Justice and the Prosecutors-General dealt with cannabis-related infringements. It states that the possession of a small amount of cannabis for personal use (no more than three grams or one plant) by an adult should lead to a simple police registration only, if there are no aggravating circumstances.

In Slovakia, the role of quantity is central to the new penal code on drugs offences. Section 171 creates two offences of possession for own use: possession of no more than three doses may be punished by up to three years' imprisonment, while a prison sentence of up to five years may be imposed for possession of 'a larger amount' (no more than 10 doses). Possession of quantities greater than this must be charged under Section 172. This allows a prison sentence of 4–10 years to be imposed if there are no aggravating factors, and for sentences of 10–15 years for possession of a larger amount (with a street value of over 10 times the 'baseline' amount of 8 000 Skk — approximately EUR 200), 15–20 years for possession of drugs on a considerable scale (defined as over 100 times the baseline) and 20–25 years or life imprisonment for possession on a large scale (defined as over 500 times the baseline).

From 2002 to 2005, the Max Planck Institute in Germany carried out an evaluation of Section 31a of the German Narcotic Drugs Act, which permits the offence of possession of 'insignificant quantities' of drugs to be exempted from prosecution in certain circumstances. The evaluation found that, in practice, the implementation of Act §31a varies considerably in the 16 *Länder* of Germany, in part because of different interpretations of 'insignificant' (Schäfer and Paoli, 2006). In March 2005, the *Land* Berlin passed a revision of its 'guideline on cannabis', according to which possession of up to 10 grams of cannabis is not prosecuted if certain criteria are fulfilled. This amount can be increased to 15 grams in individual cases.

The Minister of Health of Lithuania amended recommendations on what shall be regarded as small, large and very large amounts of narcotic and psychotropic substances, redefining these quantities. The United Kingdom Drugs Act 2005 now creates the presumption of intent to supply when a specified quantity of controlled drugs is

found, with those quantities set out in regulations defined in spring 2006.

In Bulgaria, the Amendment and Supplement Act of the penal code (new SG 26/04) abolishes Section 354a (3), which exempted addicts from criminal responsibility if they were found in possession of a single dose. Difficulties in defining the quantity of a single dose and evidence that the exception has been misused in court to benefit drug dealers were among the reasons given for this measure.

In Italy, the changes implemented in February 2006 imposed new quantity limits to define the threshold between personal use and trafficking, based on the amount of active principle of the drug, following the removal of such limits in 1993. The limits are indicated in a specific Ministry of Health decree of April 2006.

As already shown by European Legal Databases on Drugs (ELDD) research (\*), the role of quantity in drug laws is varied; in some countries (e.g. Slovakia), the quantities that delimit certain offences are strictly defined, while in others (e.g. the United Kingdom) quantities are guidelines that give rise to a rebuttable presumption of intent. Quantities may also distinguish between offences (e.g. possession or supply), or determine the penalty for the same offence. Though many countries refer to a quantity in their laws, quantity can be defined in different ways (weight, value) or even not at all. The latest, apparently contrasting, actions of Italy and Bulgaria continue to show only that there is no clear European consensus on this issue.

## Sentencing statistics

Monitoring of sentences given to drug offenders has been discussed or implemented in several countries, and in some cases action has already been taken on the results.

In Ireland, approval has been given for the establishment of a central crime statistics unit to monitor statistics on arrests, prosecutions and the nature of sentences passed, in accordance with the national drug strategy.

The German Narcotic Drugs Act allows the prosecutor to discontinue proceedings for possession of drugs without court approval under certain circumstances. Despite recommendations and guidelines on these, regulations differ significantly between *Länder*. The aforementioned study on these differences, carried out for the Ministry of Health, looked at the sentencing of over 1 800 cases in six different *Länder* (Schäfer and Paoli, 2006).

(\*) See 'The role of the quantity in the prosecution of drug offences', an ELDD legal report, and Table 1 in 'Illicit drug use in the EU: legislative approaches', an EMCDDA thematic paper (both available at <http://eldd.emcdda.europa.eu/?nnodeid=5175>).



In some provinces in Austria, there have been attempts to standardise implementation of Sections 12 and 35(4) of the Narcotics Act, which define simplified procedures to withdraw a report to the police in the case of the purchase or possession of small quantities of cannabis. Other sentencing statistics showed that the waiving of reports as statutory alternatives to punishment increased in 2004, though police reports and convictions increased further, while the number of suspended proceedings dropped slightly.

In Romania, court sentencing statistics were examined in order to monitor the success of social reintegration of drug users who commit offences other than drug use. In the majority of cases, the penalty was suspension of the sanction under surveillance. From 2004, it was noted that the courts less often imposed compulsory treatment, effectively decreasing the involvement of the probation services and thus their contribution to the social rehabilitation of drug users.

Statistics on sentencing, or avoidance of sentencing, give a far more accurate picture of the implementation of a country's drug policy than does the text of the laws (see EMCDDA, 2002a). Although not all Member States collect comprehensive sentencing statistics, in contrast to arrest statistics, countries are starting to report a greater interest in monitoring this implementation, which is in line with the trend to evaluate policy instruments <sup>(10)</sup>. The issue of collecting and analysing sentencing statistics was addressed by an EMCDDA expert meeting in 2006.

## Drug-related crime

Action 25.1 of the EU drug action plan 2005–08 foresees the adoption by the Council, by 2007, of a common definition of 'drug-related crime', on the basis of a Commission proposal based on existing studies to be brought forward by the EMCDDA.

Although there is as yet no EU definition of drug-related crime, it is usually considered to mean crimes committed under the influence of drugs, crimes committed to finance drug use, crimes committed in the context of the functioning of illicit drug markets and offences in contravention of drug legislation. Routine data are available in the EU only on the last type of crime — drug law offences.

Data on the first three types of crime are rare or patchy in the EU. Some come from ad hoc local studies, which are difficult

### Reports on the drugs–crime connection

In the Czech Republic in 2005, regional police headquarters were surveyed for the second consecutive year about drug-related crime. It was estimated that in 2004 about 62 % of drug production/distribution offences, 25 % of fraud offences, 21 % of crimes involving misappropriation of funds/property and 20 % of ordinary thefts were committed by drug users in order to finance their own consumption (Czech national report).

A survey carried out in 2004 among 15- to 16-year-olds in Finland showed that about 7 % of those who had used cannabis in the last year had financed their use illegally, more than half by selling drugs and the rest mainly by stealing (Kivivuori et al., 2005, cited in the Finnish national report).

In Ireland, two studies carried out by the Garda Research Unit in 1996 and 2000/01 among a sample of drug users known to the police estimated that drug users were responsible for 66 % of detected indictable crimes in 1996 and 28 % in 2000/01 (Keogh, 1997; Furey and Browne, 2003, cited in the Irish national report). The 2000/01 survey found that opioid users were responsible for 23 % of detected larceny offences and 37 % of detected burglaries.

to extrapolate from, while others refer only to a specific type of drug-related crime.

Data on 'reports' <sup>(11)</sup> of drug law offences are available in all the European countries analysed in this report. They reflect differences in national legislation, but also the different ways in which the laws are applied and enforced, and differences in the priorities and resources allocated by criminal justice agencies to specific offences. In addition, there are variations between national information systems on drug law offences, especially in relation to reporting and recording practices — i.e. what is recorded, when and how. Because these differences make direct comparisons between EU countries rather difficult <sup>(12)</sup>, it is more appropriate to compare trends rather than absolute numbers.

Over the five-year period 1999–2004, the number of 'reports' of drug law offences increased overall in most EU countries (in fact in all reporting countries except Italy and Portugal, with particularly marked increases — twofold or more — in Estonia, Lithuania <sup>(13)</sup>, Hungary <sup>(14)</sup> and Poland). In 2004, this increasing trend was confirmed in most

<sup>(10)</sup> See 'National policies: evaluation of laws' (<http://ar2004.emcdda.europa.eu/en/page021-en.html>).

<sup>(11)</sup> The term 'reports' for drug law offences is given in quotation marks because it describes different concepts in different countries. For an exact definition for each country, refer to the methodological notes on drug law offences in the 2006 statistical bulletin.

<sup>(12)</sup> For a more complete discussion of methodological issues, refer to the methodological notes on drug law offences in the 2006 statistical bulletin.

<sup>(13)</sup> The increase in Lithuania is due to the implementation in May 2003 of the new criminal code.

<sup>(14)</sup> The increase in Hungary is mainly due to an amendment to the penal code and the criminal procedure.

reporting countries <sup>(15)</sup>, although a few countries reported a fall over the previous year — the Czech Republic, Greece, Latvia, Luxembourg, Portugal, Slovenia (since 2001), Slovakia, Finland and Bulgaria <sup>(16)</sup>.

In most EU Member States the majority of reported drug law offences <sup>(17)</sup> are related to drug use or possession for use <sup>(18)</sup>, ranging in 2004 from 61 % of all drug law offences in Poland to 90 % in Austria. In the Czech Republic, Luxembourg, the Netherlands and Turkey, most reported drug law offences relate to dealing or trafficking, with the proportion varying from 48 % of all drug offences in Luxembourg to 93 % in the Czech Republic.

Over the same five-year period, the number of offences for use/possession for use increased overall in all reporting countries, except Italy, Portugal, Slovenia, Bulgaria and Turkey, which reported a declining trend <sup>(19)</sup>. The share of all drug law offences accounted for by these offences also increased in most reporting countries over the period, although the rate of increase was generally low, except in Cyprus, Poland and Finland, where more marked upward trends were reported. However, in Luxembourg, Portugal, Bulgaria and Turkey, the proportion of drug offences related to use/possession for use fell overall <sup>(20)</sup>.

In most of the Member States, cannabis is the illicit drug most often involved <sup>(21)</sup> in reported drug law offences <sup>(22)</sup>. In the countries where this is the case, cannabis-related offences in 2004 accounted for 34–87 % of all drug law offences. In the Czech Republic and Lithuania, amphetamines-related offences predominated, accounting, respectively, for 50 % and 31 % of all drug law offences; while in Luxembourg cocaine is the most reported substance (in 43 % of drug law offences).

In 1999–2004, the number of ‘reports’ of drug law offences involving cannabis increased overall in the majority of reporting countries, while decreases were evident in Italy and Slovenia <sup>(23)</sup>. Over the same period, the proportion of drug offences involving cannabis increased in Germany, Spain, France, Lithuania, Luxembourg, Portugal, the United Kingdom and Bulgaria, while it remained stable overall in Ireland and the Netherlands, and decreased in Belgium, Italy, Austria, Slovenia and Sweden <sup>(24)</sup>. Although in all reporting countries (except in the Czech Republic and Bulgaria and for a few years in Belgium) cannabis is more predominant in offences for use/possession than in other drug law offences, the proportion of use-related offences involving cannabis has decreased since 1999 in several countries — namely Italy, Cyprus (2002–04), Austria, Slovenia and Turkey (2002–04) — and has fallen over the last year (2003–04) in most reporting countries, possibly indicating a reduced targeting of cannabis users by law enforcement agencies in these countries <sup>(25)</sup>.

Over the same five-year period, the number of ‘reports’ and/or the proportion of drug law offences involving heroin decreased in the majority of reporting countries, except Belgium, Austria, Slovenia and Sweden, which reported upward trends in the number of ‘reports’ involving heroin <sup>(26)</sup> and/or the proportion of drug offences that involved heroin <sup>(27)</sup>.

The opposite trend can be observed for cocaine-related offences: in terms of both number of ‘reports’ <sup>(28)</sup> and the proportion of all drug offences <sup>(29)</sup>, cocaine-related offences have increased since 1999 in most reporting countries. Bulgaria is the only country to report a downward trend in cocaine offences (both numbers and proportions of drug offences).

<sup>(15)</sup> Data on ‘reports’ for drug law offences were available for 1999–2004 in all countries (although sometimes not for every year) except Cyprus, Slovakia, Bulgaria, Romania, Turkey and Norway; and for 2004 in all countries except Ireland, the United Kingdom and Norway.

<sup>(16)</sup> See Table DLO-1 and Figure DLO-1 in the 2006 statistical bulletin.

<sup>(17)</sup> Breakdowns by type of offence were available in all countries (although sometimes not for every year between 1999 and 2004) except Denmark, Estonia, Latvia, Lithuania, Hungary, Slovakia and Romania.

<sup>(18)</sup> See Table DLO-2 in the 2006 statistical bulletin.

<sup>(19)</sup> See Table DLO-4 in the 2006 statistical bulletin.

<sup>(20)</sup> See Table DLO-5 in the 2006 statistical bulletin.

<sup>(21)</sup> Breakdowns of drug law offences by substance were available in all countries (although sometimes not for every year between 1999 and 2004) except Denmark, Estonia, Latvia, Hungary, Finland, Romania and Norway.

<sup>(22)</sup> See Table DLO-3 in the 2006 statistical bulletin.

<sup>(23)</sup> See Figure DLO-2 in the 2006 statistical bulletin.

<sup>(24)</sup> See Table DLO-6 in the 2006 statistical bulletin.

<sup>(25)</sup> See Figure DLO-3 in the 2006 statistical bulletin.

<sup>(26)</sup> See Figure DLO-4 in the 2006 statistical bulletin.

<sup>(27)</sup> See Table DLO-7 in the 2006 statistical bulletin; note that in Sweden the proportion of heroin-related offences decreased over the period 1999–2003.

<sup>(28)</sup> See Figure DLO-5 in the 2006 statistical bulletin.

<sup>(29)</sup> See Table DLO-8 in the 2006 statistical bulletin.

**European drug policies: extended beyond illicit drugs?,  
in *EMCDDA 2006 annual report: selected issues***

In Europe, the scope of drug policies is beginning to stretch beyond illicit drugs and to encompass other addictive substances or even types of behaviour. This is found in the drug policies of some Member States and in EU drug strategies. Increasingly, research is addressing the issue of addiction or addictive behaviours irrespective of the substances concerned. The selected issue on the increasing attention being given in national illicit drugs strategies or policy documents to licit substances or to addiction per se aims

at presenting a first insight into this emerging phenomenon in the European Union.

Although drug strategies do not always refer to licit drugs or addictions, the selected issue finds that prevention programmes and, in some countries, treatment measures apply to both licit and illicit drugs, targeting as a priority children and young people. A slow integration, strategically or institutionally, of licit drugs into policy and measures against illicit drugs appears to be more and more common.

This selected issue is available in print and on the Internet in English only (<http://issues06.emcdda.europa.eu>).



## Chapter 2

# Responding to drug problems in Europe — an overview

### Prevention

Experiences in some Member States suggest that drug prevention interventions at the individual level may be more effective if also supported by regulatory policies on legal drugs that can limit the access of young people to these substances and reduce their social acceptability. As a result, environmental prevention strategies that address the normative and cultural framework of substance use are gaining ground in parts of Europe, supported by the first steps taken at EU level: the tobacco advertisement directive and the WHO framework convention on tobacco control (see the section on environmental strategies in the selected issue on drug use in recreational settings).

The role of mass media campaigns is increasingly being seen as one of raising awareness (to underpin, support and explain to the population at large the rationale underlying environmental strategies) rather than one of changing behaviour. In this regard, a recent German review of the international literature (Bühler and Kröger, 2005, cited in the German national report) recommends that media campaigns be used as a supporting measure and not as the only measure to achieve behavioural changes.

### Public health prevention

While health promotion — as a framework condition for prevention — strives to encourage people to adopt healthy lifestyles and to create healthy living conditions for all, the new term ‘public health prevention’ is increasingly mentioned by some Member States (Italy, Netherlands, Slovakia) and Norway. Public health prevention entails a range of prevention measures aimed at improving the health of vulnerable sections of society, among which drug prevention is one element. These measures are particularly suited to the needs of young people, whose problem behaviours, including drug use, are strongly conditioned by vulnerability (social and personal) and by living conditions. Hence, as selective and indicated prevention strategies target social and personal risk conditions, they are naturally linked to other youth-relevant public health policies (adolescent mental

health strategies regarding conduct disorders, attention deficit disorder, etc.), social policies (the provision of leisure spaces and support for vulnerable youth or deprived families), education policies (reducing school dropout), etc. Thus, public health prevention targets the full set of vulnerability factors which are relevant for tackling drug problems by involving services and sectors that would not usually focus on drugs.

### Universal school-based prevention

Programme-based prevention approaches are gaining ground within school-based prevention. Programme-based prevention implies standardised delivery in a defined number of sessions, each with exactly defined contents, and detailed teacher and pupil material. This facilitates monitoring and evaluation and increases the accuracy, fidelity and consistency of interventions, leading to high-quality delivery. As a result, more Member States than before are monitoring school-based prevention interventions (the Czech Republic, Greece, Spain, Ireland, Italy, Cyprus, Hungary, the Netherlands and the United Kingdom). The first ever European drug abuse prevention trial ([www.eudap.net](http://www.eudap.net)) has shown promising results. Funded by the European Commission, the project was implemented and cross-evaluated in seven countries, nine regional centres and 143 schools and involved 7 000 students (3 500 in a trial group and 3 500 in a control group). EU-Dap reports that, compared with the control group, students in the trial group had a 26 % lower probability of smoking daily, a 35 % lower probability of being frequently drunk and a 23 % lower probability of using cannabis. A comparable programme-based research approach is Blueprint in the United Kingdom <sup>(30)</sup>. Additionally, more attention is now given to stricter technical guidance and to better coverage in the implementation of school-based prevention (e.g. in France and Ireland).

### Police in schools

The role of the police in school-based prevention is a controversial issue. In Belgium, the French Community

<sup>(30)</sup> [www.drugs.gov.uk/young-people/blueprint/](http://www.drugs.gov.uk/young-people/blueprint/)

recommends that health promotion and prevention policy should be implemented by school authorities and that the police force should not be involved in prevention programmes. Also, in the United Kingdom, a policy paper (ACPO Drugs Committee, 2002) recommended that the police service act only within its areas of expertise (security, offences, order) and not get involved in specific drug education. Following this line of action, Portugal continues to run a proximity policing programme, *Escola Segura* (safe school). During the 2004/05 school year a total of 320 police officers were specifically allocated to the school setting, with the aim of implementing proximity policing and offence dissuasion, both during the day and at night. In France, experts trained by the law enforcement services to liaise with youth or grown-up populations visit schools or other services on request. However, despite recommendations that drug education should not be delivered by police officers in uniform, as it could in some cases be counterproductive, activities carried out by police services within schools are still common in several Member States.

### Selective prevention

With the recognition and development of the selective prevention approach by most Member States, vulnerable groups are increasingly being targeted. For example, Germany, Greece, Luxembourg, Austria, Finland and the United Kingdom report programmes targeting young offenders.

Several countries (e.g. Poland and Slovakia) have begun to put emphasis on vulnerable groups. In Sweden, the most obvious increase in activities compared with previous years has been in programmes for pre-school children at risk and school children with externalising behaviours. The number of municipalities implementing these programmes has approximately doubled. In addition, Norway is developing a national strategy for early intervention against problem drug and alcohol use in which prevention efforts will specifically target risk groups. Approaches not based on abstinence are effective in reducing not only consumption but also initiation among those groups in which incipient drug use is already occurring. Thus, Poland has a nationwide programme to change the drug-related behaviour of vulnerable children or children who are in the early stages of drug use. The specific objective of the Polish programme is to support the family in solving drug problems. In this regard, it is helpful that the concept of selective prevention does not focus on drug use and does not stigmatise drug use; rather, its focus is on vulnerability in a broader sense.

Member States increasingly report targeting of specific ethnic groups in their selective prevention policies, with

four countries (Belgium, Germany, Italy and Luxembourg) reporting on new projects in this area. In Italy, the priority of many projects is now to protect children, mothers and immigrant families or those belonging to ethnic minorities. Luxembourg reports that special attention is given to young people and to the biggest immigrant community, focusing on linguistic and sociocultural specificities.

### Selective prevention in schools

Young people at risk of dropping out of school and/or with behavioural problems are increasingly being addressed by selective drug prevention, for instance in Italy, where some 15 % of prevention interventions in schools are aimed at vulnerable subgroups of students (selective and indicated prevention). The main subgroups at which selective prevention in schools is aimed are students with social behavioural problems, school problems or family problems, immigrant students and those belonging to ethnic minorities. In fact, academic performance and school attendance are good predictors for drug problems, and monitoring these enables early and accurate intervention.

School dropout is the focus of drug prevention programmes in several Member States. The HUP project in Storstrom County, Denmark, aims to increase the average rate of school completion from 75 % towards the national target of 95 % by focusing on vulnerable students. Similar projects are reported in Ireland, Portugal (47 projects), Romania (one project) and Norway (brochures for teachers). Reducing early school leaving is an official aim of Ireland's national strategy, with the target of a 10 % reduction compared with 2005/06 rates in LDTF (local drug task force) areas. Students most at risk are targeted by selective prevention programmes in Malta, while in France and Slovakia counselling services are provided in schools on the basis of (self-)referral.

### Family-based prevention

With growing numbers of younger children initiating drug use, the improvement and intensification of family-based prevention are of increasing importance. In pre-teenagers, family influence prevails over peer influence. The role of the family in establishing norms and support for children is more relevant to prevention than imparting information on substances.

Family-based prevention in the EU is becoming more targeted and more firmly needs-based. Several Member States (Germany, Spain, Ireland, Italy and the United Kingdom) have acknowledged that it can be difficult for institutions to contact problem families. As a result, in the United Kingdom the FRANK campaign has developed an action pack for drug and alcohol action teams and prevention practitioners on how to reach the family, and in several other Member States selective prevention programmes targeted at families

at risk are now being implemented. These programmes employ several techniques to attract at-risk families (e.g. providing food, financial incentives, babysitting) mostly based on Kumpfer's 'strengthening families programme' (Kumpfer et al., 1996).

The 'strengthening families programme' (SFP) is being implemented in Spain (Palma de Mallorca and Barcelona), the Netherlands (two cities, evaluation study) and Sweden (two cities). Training in Ireland and Italy is under way and it is envisaged in the latter that coverage will extend to several cities. Norway is evaluating the similar MST programme in a randomised controlled trial. These selective family-based programmes have similar features in all Member States where they have been implemented.

Programmes for neglected children and young people from dysfunctional families are being run in Poland and in some provinces in Austria. These programmes are implemented in local community-based venues such as socio-therapeutic common rooms, upbringing facilities, youth clubs and prevention centres.

Some countries are focusing increasingly on the children of alcoholics (Belgium, Germany, Austria). The remaining countries still focus solely on the children of drug users.

### Community-located prevention

Most selective prevention programmes are operated at the level of the community. Partly, this is because the various social services involved are usually coordinated at this level. However, in countries where communities have the power and will to enforce local norms, the community is a natural unit for environmental strategies. Community-based selective prevention is common in the Nordic countries and in Belgium, the Netherlands, Poland and the United Kingdom, and is increasing in countries that have made less use of this approach in the past (France, Italy, Hungary, Portugal).

By establishing community norms on the availability and methods of consumption of legal drugs, and by optimising local services, local environmental prevention strategies are a good starting point for effective drug prevention programmes.

### Quality control in prevention

Quality control in prevention is of increasing importance, especially as many Member States have devolved the competences and responsibilities for prevention to the local level (Denmark, Italy, the Netherlands, Poland, Portugal and Slovenia) and/or delegated responsibility for drug prevention to non-governmental organisations (NGOs) or

semi-independent associations (Belgium, Germany, France, Hungary and Finland). Accordingly, some Member States report on strategies to provide common quality criteria, standards and technical advisory services at the local level, supporting schools or communities in developing school policies (Belgium, Denmark, the Netherlands and the United Kingdom), implementing adequate prevention programmes and assuring minimum quality criteria (Denmark, France, Lithuania, Hungary, Slovakia, the United Kingdom, Romania and Norway).

Greece and Austria are leading the way in defining specifications for the accreditation of prevention agencies or prevention professionals.

## Treatment and harm reduction responses

The context for EMCDDA data collection on harm reduction and treatment responses to the drug problem is provided by two main EU instruments:

- the EU drug strategy 2005–12 and its first action plan 2005–08, which present a framework for national policies as well as detailed recommendations for actions in the Member States aiming at the prevention of drug use and at increasing the coverage and quality of treatment and harm reduction services;
- the Council Recommendation of 18 June 2003 <sup>(31)</sup>, which gives further specific recommendations on measures that Member States should consider implementing, in order to prevent and reduce health-related harm associated with drug dependence and to provide for a high level of health protection. This recommendation has been reinforced by its inclusion in the EU action plan as objective 14.

In order to evaluate the level of implementation of the strategy, it is important to determine levels of service provision and the extent to which the services are being used. Ultimately, however, sound estimates of the coverage — the extent to which the intended target group is reached by treatment and harm reduction measures — will be needed to evaluate the action plan objectives and for creating a basis for assessing the impact of the strategy.

Throughout the eight-year implementation period of the strategy, the EMCDDA supports the Commission in the evaluation process by providing data from the EU system of epidemiological indicators and by developing and implementing a number of specific data collection tools to determine service provision and utilisation of treatment and harm reduction services. Compared with the good overview

<sup>(31)</sup> Council Recommendation 2003/488/EC.



of the epidemiological situation that has been achieved by the EMCDDA-driven development and implementation of indicator-based monitoring, standardised reporting on responses is limited.

### Opioid substitution treatment

Methadone maintenance treatment for heroin users was pioneered in Europe by Sweden (in 1967), the Netherlands and the United Kingdom (1968) as well as by Denmark (1970), but its use remained limited for many years.

Following the discovery of the extent to which the HIV epidemic had spread among drug users in western European countries, therapeutic goals and approaches began to shift in many countries from abstinence as the primary goal to the adoption of interventions more oriented towards the reduction of the harms associated with drug use. The need for repeated treatment interventions was accepted and the benefits of drug maintenance treatment for the stabilisation and improvement of opioid users' health and social situation as well as for society as a whole was recognised.

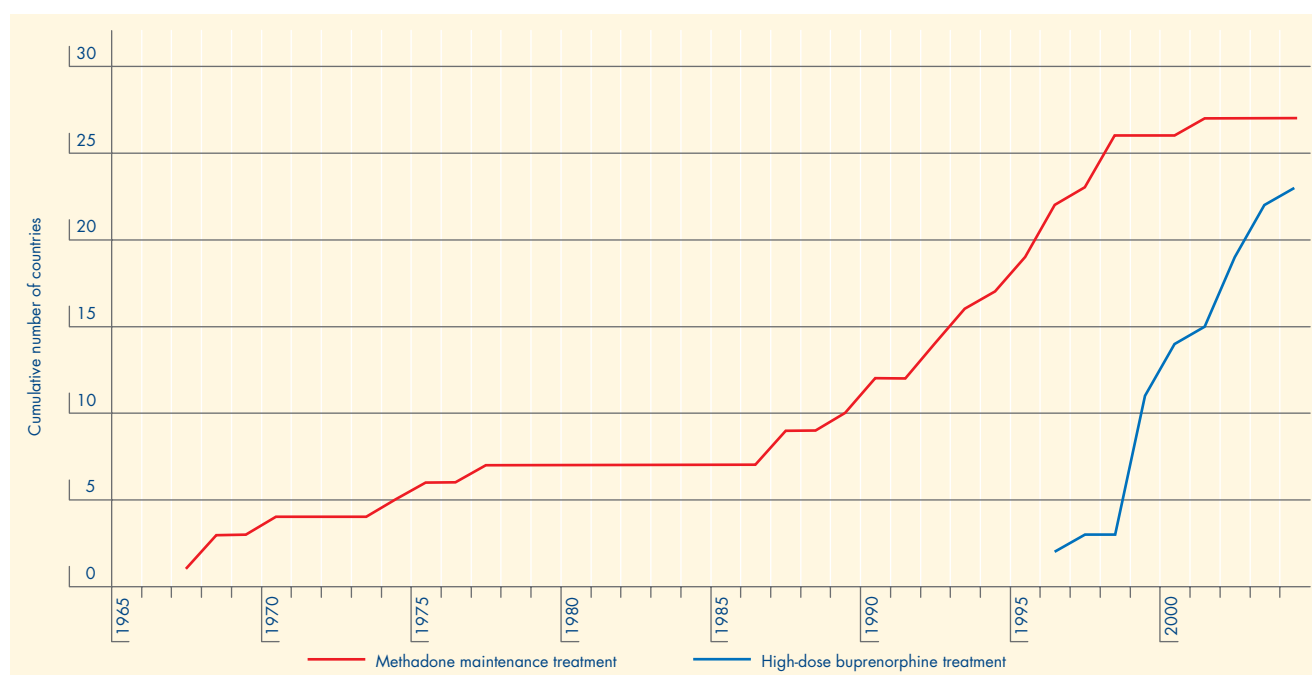
After the late 1980s, the rate at which methadone maintenance was introduced as a treatment modality accelerated. By 2001, 24 EU countries as well as Bulgaria, Romania and Norway had introduced it (Figure 1). However, scale and coverage differ considerably between countries (see Chapter 6).

In 1996, the legal basis for the use of medication containing buprenorphine in the treatment of heroin users was first established in an EU Member State (see the selected issue on buprenorphine in the 2005 annual report). It is now available and used in the majority of Member States. As buprenorphine is controlled under a less stringent schedule of UN drug conventions, countries are given greater possibilities for its prescription. In some countries, this treatment option has led to rapid increases in the number of clients treated. New pharmacotherapy treatment modalities beyond agonist substitution are being explored, and research attention is now turning towards developing treatment responses for cocaine and crack users, many of whom also use heroin or have used it in the past (see also Chapter 5).

It is estimated that in the EU more than half a million opioid users received substitution treatment in 2003, which represents one third of the currently estimated 1.5 million problem opioid users (EMCDDA, 2005a). The new Member States and candidate countries account for only a small fraction of the clients in substitution treatment in the European region, which can partly be explained by lower levels of opioid use in these countries. Although the overall provision of substitution treatment remains low in these countries, there are some indications of increases in Estonia, Lithuania and Bulgaria.

The information provided shows that in some countries there have been further increases in methadone treatment provision, but that in eight countries the numbers of people

**Figure 1:** Introduction of methadone maintenance and high-dose buprenorphine treatment in EU Member States, candidate countries and Norway



Sources: National focal points.



receiving such treatment stabilised or decreased <sup>(32)</sup>. Four of these countries — Denmark, Spain, Malta and the Netherlands — have a profile of long-standing heroin use and highly accessible methadone substitution programmes. The other four countries, Latvia, Hungary, Poland and Romania, are characterised by low geographical coverage of methadone substitution, and in some places there is a waiting list for treatment.

It is difficult to determine if decreasing numbers of clients receiving methadone treatment means that such clients are switching to buprenorphine treatment when available. The extent to which drug dependence treatment is delivered by GPs is often not known at national level.

### Provision and type of drug dependence treatment

A survey conducted among national focal points (NFPs) in 2005 assessed the general characteristics of treatment provision in Europe. National experts were asked whether the majority of opioid users were treated in drug-free or medically assisted programmes or whether both modalities were equally prevalent.

The results show a ratio largely in favour of medically assisted treatment, with the main substance used being methadone (except in the Czech Republic and France; for more details see Chapter 6). The results further show that drug-related treatment in most countries is predominantly provided in outpatient settings — only Latvia and Turkey provide most treatment in inpatient settings. Traditional psychotherapeutic treatment modalities (psychodynamic, cognitive-behavioural, systemic/family therapy or Gestalt therapy) are the most frequently used modalities in outpatient treatment in Ireland, Latvia, the United Kingdom, Bulgaria and Turkey. Nine countries report the provision of predominantly ‘supportive’ methods (which can include counselling, socio-educative and environmental therapy, motivational interviewing or relaxation techniques and acupuncture), and 10 countries combine the different methods in their outpatient work.

Concerning inpatient care, the 12-step Minnesota model is frequently used in residential care in Ireland, Lithuania, Hungary and Turkey, while six countries predominantly apply psychotherapeutic treatment modalities, five countries ‘supportive’ methods and 10 countries a combination of such approaches.

Over the last decade, but even more so in the last five years, many European countries have ‘opened the doors’ to treatment by expanding their provision of substitution treatment and reducing access limitations. Never before have such large numbers of drug users been reached by the system of care. Many but not all require assistance beyond the treatment of their dependency, and many seem to need low-threshold care as well as substantial support for their reintegration.

### Harm reduction responses

At the same time as reaching clients and maintaining contact became an objective in itself, outreach and low-threshold service provision gained recognition and support and have now become essential parts of a comprehensive response in many Member States. Common response profiles are visible in Europe with regard to the prevention of infectious diseases among drug users and the reduction of drug-related deaths (see also Chapter 7).

The reduction of drug-related deaths was defined for the first time as a European drug policy objective six years ago, and it is an objective of the current EU action plan <sup>(33)</sup>. The number of countries which include a direct reference to the target of reducing drug-related deaths in their national policies has continued to increase in recent years, with eight countries adopting such strategies during 2004 and 2005 (bringing the total number to 15). Besides national policies, complementary approaches at city level are common: several capital cities (including Athens, Berlin, Brussels, Lisbon and Tallinn) but also wider semi-urban regions (e.g. the eastern region of Ireland, around Dublin) have their own strategies for reducing drug-related deaths. In the Czech Republic, Italy, the Netherlands and the United Kingdom, local or regional policies are reported to exist, and in Bulgaria strategies have been drawn up at local level in nine cities.

As in the previous European Union drug strategy and action plan, prevention of the spread of infectious diseases remains an important goal in the current strategy and is specified as objective 16 in the action plan for 2005–08. This emphasises the continued importance that European governments and the Commission place on the health-related consequences of drug use <sup>(34)</sup>.

A large majority of EU countries and Norway have clearly spelled out their approach to the prevention of infectious

<sup>(32)</sup> See Table NSP-7 in the 2006 statistical bulletin.

<sup>(33)</sup> Objective 17 of the EU action plan 2005–08 calls for the reduction of drug-related deaths to be included as a specific target at all levels, with interventions specifically designed for this purpose.

<sup>(34)</sup> In particular, objective 16 of the EU action plan 2005–08 refers to infectious disease prevention. Objective 14 calls for the implementation of a Council recommendation on prevention and reduction of health-related harm associated with drug dependence, adopted in 2003 [Council Recommendation 2003/488/EC]. A report by the Commission on the implementation of this recommendation, including information collected from policymakers and Reitox national focal points, is foreseen in 2007 as a contribution to the evaluation of the EU drug strategy.

## Actions and interventions concerning drug users in prisons in the new Member States

The present data are based on a joint EMCDDA–WHO/Europe data collection project that was conducted in 2005 <sup>(1)</sup>.

Drug testing in prisons is reported in the majority of new Member States. However, countries vary in terms of their drug testing schemes. Inmates are tested upon admission only in the Czech Republic, Malta and Slovenia. Malta and Slovenia are also the only countries to test prisoners before they go on leave. Random drug testing is carried out in all prisons in the Czech Republic, Malta, Slovenia and Slovakia and in less than 50 % of prisons in Hungary.

Drug-free treatment approaches dominate the interventions in prisons in the new Member States, but the coverage of such interventions is limited. Drug-free treatment with psychological support is reported to be available in less than 50 % of prisons in the Czech Republic, Estonia, Lithuania, Hungary, Poland and Slovakia. Drug-free units exist in most countries, but only the Czech Republic and Slovenia report such facilities in more than 50 % of prisons. Brief detoxification with medication is more widely available (all prisons in Latvia, Hungary, Malta, Slovenia and Slovakia).

The number of prisoners in new Member States having access to treatment with antagonists and substitution treatment is generally low. Except in emergency cases, treatment with antagonists does

not appear to exist, and few countries report the availability of opioid substitution treatment for acute detoxification in prison (Hungary, Malta, Poland and Slovenia). Drug-related pre-release interventions mainly take the form of counselling and information provision (Czech Republic, Latvia, Lithuania, Hungary, Poland, Slovenia and Slovakia). Substitution treatment as a pre-release intervention is available in all prisons in Slovenia and in less than 50 % of prisons in Poland.

Few prisons in the new Member States report harm reduction measures for injecting drug users. Needle and syringe exchange programmes are not implemented in prisons in any of the new Member States, and only Estonia, Lithuania and Slovenia report the provision of disinfectants for cleaning syringes. Nevertheless, drug-related infectious diseases are being tackled in prisons. Vaccinations against hepatitis B are available in all prisons in six new Member States (Czech Republic, Estonia, Hungary, Malta, Slovenia and Slovakia), and five countries report the availability of antiviral treatment for hepatitis C-positive prisoners in all prisons (Czech Republic, Lithuania, Poland, Slovenia and Slovakia). Antiretroviral treatment for HIV-positive prisoners is reported by all new Member States <sup>(2)</sup>.

<sup>(1)</sup> Data were provided by the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Malta, Poland, Slovenia and Slovakia. For further references see EMCDDA (2005c).

<sup>(2)</sup> No data are available for Cyprus.

diseases among drug users and have included concrete objectives or tasks in their national drug strategy documents or have adopted a separate policy text that specifies how infectious disease prevention among drug users shall be tackled (Spain, Latvia, Luxembourg, Sweden), or have done both (Estonia, France, the United Kingdom). Malta and Austria are planning to draw up specific policies for their approach in this area.

In Germany and Greece, concrete measures aimed at the prevention of infectious diseases form part of the national drug strategy, while infectious disease prevention is not explicitly identified as an objective.

These infectious disease prevention strategies are in most cases quite recent, and the timing of their adoption coincides in a number of countries with the previous EU drug strategy (2000–04), in which a reduction in the incidence of infectious diseases among drug users became a European target for the first time.

According to the reports by NFPs <sup>(35)</sup>, objectives and target groups in national strategies also show a high level of synergy at the European level. Besides drug injectors, target groups include sex workers and prisoners. In the new central European Member States in particular, but also in Norway, young people and non-injectors are clearly addressed as further important target groups for action to prevent infectious disease. Danish and Estonian policies widen the target groups even more and include groups in close contact with drug users.

In many EU countries, strategies aimed at reducing infectious disease are clearly geared towards HIV/AIDS, particularly Estonia, Spain, Cyprus, Latvia and Lithuania. However, in 10 countries (37 %), infectious disease strategies explicitly mention the prevention of hepatitis C infection among drug users <sup>(36)</sup>. Ireland launched a consultation process in 2004, preparing such a strategy, and in Germany recommendations on prevention and treatment were issued. Professional and

<sup>(35)</sup> This analysis is largely based on national reporting with a structured questionnaire (SQ 23), updated with information provided by national focal points in their national reports.

<sup>(36)</sup> Including France and England, both of which have established full-blown hepatitis C prevention strategies: *Plan national hépatites virales C et B (2002–05)* (<http://www.sante.gouv.fr/htm/actu/hepatites/situation.htm>) and *Hepatitis C: action plan for England, 2004* (<http://www.dh.gov.uk/>) respectively.

public discussion in Austria was boosted by an international conference on the topic held in Vienna in 2005.

Harm reduction strategies form an important part of the European response to drug use today, and improving access to services for the prevention and reduction of health-related harm is a main priority of the EU drug strategy 2005–12. The common strategic platform on the reduction of health-related harm that the EU drug strategy provides is mirrored in many national policies across the EU and has supported a mainstreaming of evidence-based responses in this area.

In 2004, an improvement in the monitoring of syringe availability at European level was documented. However, information on the provision, utilisation and coverage of the wide range of further important services delivered by low-threshold agencies is barely recorded at national level in most countries. A European picture cannot easily be drawn. A project to improve the data situation is described in the box ‘Low-threshold agencies as an important data source’.

#### Low-threshold agencies as an important data source

Low-threshold agencies play a crucial role in increasing drug users’ access to care. For populations of drug users that are ‘hidden’ or more difficult to reach or have lost contact with the care system, these agencies can provide a point of contact and a setting for delivering medical and social services.

Although all low-threshold agencies have in place some system for documenting their service delivery, and monitoring and reporting can be extensive, these activities are primarily orientated towards accountability to funding bodies and less towards internal quality management or service planning and evaluation. All too often, valuable information that is collected remains at the level of the agency. Despite its potential importance for monitoring drug use patterns and trends as well as service access, the low-threshold setting appears to be largely underused. One main obstacle is lack of standardisation and comparability of the collected information.

It is important for improving the quality of data available on the provision and utilisation of harm reduction services that a data collection tool exists that is appropriate for agencies and at the same time produces relevant results for national and European monitoring purposes. An initiative in this direction is the joint EMCDDA–Correlation project, supported by experts from the national focal points of France, Ireland, Hungary and Norway. The Correlation network (European Network for Social Inclusion and Health, [www.correlation-net.org](http://www.correlation-net.org)) represents governmental and non-governmental organisations from 27 European countries and is funded under the public health programme of the European Commission (Health and Consumer Protection DG).

#### Targeted treatment and quality management

The current EU action plan also calls for high-quality treatment and harm reduction services.

The use of quality management tools at the level of the treatment and harm reduction planning has resulted in services being more target group specific, e.g. respecting the different needs of gender groups (see also the selected issue on gender).

Treatment units or programmes that exclusively service one specified target group are a common phenomenon across the EU. Children and young people under the age of 18 are treated in specialised agencies in 23 countries; the treatment of drug users with psychiatric co-morbidity takes place in specialised agencies in 18 countries; and women-specific services are reported to exist in all countries except Cyprus, Latvia, Lithuania, Bulgaria and Turkey. Services designed to meet the needs of immigrant drug users or of groups with specific language requirements or religious or cultural backgrounds are less common but have been reported from Belgium, Germany, Greece, Spain, Lithuania, the Netherlands, Finland, Sweden and the United Kingdom.

Units that specialise in treating cannabis or cocaine users have been reported from 13 countries, and specific treatment programmes for these groups in drugs agencies exist in eight countries. However, the availability and accessibility of such services are rated to be low in most of these countries. A similar specialised programme for amphetamine users is reported from Spain, Slovakia and the United Kingdom.

Further concrete steps towards enhancement of quality in treatment and care are individual case management, mediation of the provision of specialist services (i.e. treatment of co-morbidities) and pretreatment client assessments to better match client profiles with the treatment on offer with the aim of achieving longer retention and increased treatment effectiveness.

Despite the overall expansion of treatment options, engaging with some groups of drug users, particularly those with long-term and chronic problems, remains a challenge for drug services. Outreach and low-threshold interventions are common approaches to attempting to make contact and engage with these hard-to-reach populations. A more controversial approach is the development in some countries of supervised drug consumption rooms mostly targeting drug injectors but now sometimes also extending provision to crack cocaine or heroin smoking (see EMCDDA, 2004c). Another controversial area of service development and experimentation is the use of heroin by a few countries as an agent for drug substitution treatment. Although, overall, activities in this area remain very limited

compared with other treatment options, some studies have suggested that heroin prescribing may have potential benefits for clients where methadone maintenance treatment has failed. For example, a recent German randomised controlled trial of heroin-assisted treatment (Naber and Haasen, 2006) reported positive outcomes in terms of both health and reductions in use of illicit drugs. Nonetheless, no clear consensus currently exists across Europe on the cost and benefits of this approach and it remains an area where there is considerable political and scientific debate.

With the increasing availability and quality of treatment, emphasis in some European cities has also shifted towards reducing the impact of drug use on the community. Assertive outreach work and an attractive range of low-threshold services have shown promise in some local contexts (see 'Harm reduction approaches' in Chapter 5) and might be valuable and effective models to be used more broadly to re-establish communication with marginalised groups and eventually channel them into treatment.

The development of 'safer' substitution products (i.e. substances less likely to be diverted into the black market) makes it likely that drug dependency treatment will move even further towards the GP's surgery. This is also a process of normalisation, which allows drug dependency to be treated like a chronic disease such as diabetes.

Some countries report that the large groups of heroin users in substitution treatment create a corresponding demand for social reintegration support, especially for paid work. Under the current economic circumstances, many countries may find it difficult to meet the vocational reintegration needs of older heroin users, even if they are stabilised in drug maintenance treatment. This situation is aggravated by the high levels of morbidity among this group.

## Social reintegration

All the available literature and facts and figures from Member States converge towards the same truth: the life situations of drug users are far more problematic and precarious than those of the general population. Thus, in the last two EU drug action plans, social reintegration has been one of the ultimate aims in order to improve the health and social status of drug users.

The 2005–08 action plan calls on Member States to 'improve access to and coverage of rehabilitation and social reintegration programmes'. Although social measures are still a less well-established response to problem drug use than treatment, interventions combining treatment, health and social actions are recognised by professionals as the best response to achieve drug user rehabilitation.

Data on social reintegration <sup>(37)</sup> are scarce in Europe, mostly because of the obstacles to collecting quantitative information in this field. Hence, most of the information related below is based on a qualitative assessment focusing on policy, implementations and quality assurance within the Member States <sup>(38)</sup>.

In 2004/05, in response to the EU action plan, 20 of the 28 reporting countries <sup>(39)</sup> had a strategy for drug-related social reintegration; a further four countries, although they do not address this issue explicitly in their national drug strategy or other drug policy documents, have regional or local strategies in place; three have neither.

The main provider of funds is to be found at state/national level in 11 countries, whereas funding is predominantly at regional/local level in eight countries. In another eight countries, the funding comes from both levels, with no apparent predominant provider, or through health insurance schemes.

In the EU Member States, problem drug users can access social measures through facilities either exclusively dedicated to drug users or targeting socially deprived groups. Among these measures, housing is one of the key pillars. The service most commonly offered to homeless problem drug users is access to 'generic housing services' (in 21 countries), while 18 countries offer housing facilities solely for problem drug users and 13 countries combine the two systems. However, there are doubts about the effective access of homeless problem drug users to these facilities. Low availability, local resistance to providing drug users with new facilities, restricted criteria for access and difficulties for homeless problem drug users in sticking to the rules are among the problems reported.

Getting homeless problem drug users into stable accommodation is the first step towards stabilisation and rehabilitation. Based on the estimated numbers of problem drug users and the proportion of homeless people among

<sup>(37)</sup> Social reintegration is defined as 'any social intervention with the aim of integrating former or current problem drug users into the community'. The three 'pillars' of social reintegration are housing, education and employment (including vocational training). Other measures, such as counselling and leisure activities, may also be used.

<sup>(38)</sup> For more information see <http://www.emcdda.europa.eu/?nnodeid=1573>

<sup>(39)</sup> Member States plus Bulgaria, Romania, Turkey and Norway, but no information available for Estonia.

clients in treatment, there are approximately 75 600 to 123 300 homeless problem drug users in Europe. As facilities are currently available in most countries, and

as some countries continue to implement new structures, the effect of these measures will depend on ensuring that homeless problem drug users can access these services.

**A gender perspective on drug use and responding to drug problems, in *EMCDDA 2006 annual report: selected issues***

Generally among drug users, males far outnumber females. In the EU Member States, not only is the use of illicit drugs more common in males, but men are much more likely to develop problems, seek treatment and die from drug use.

This selected issue looks at drug use and related problems from a gender perspective. Among the important questions

addressed are: What differences exist between the use of drugs by men and women and is the gender gap narrowing? How have Member States developed gender-specific approaches to drug prevention, treatment, social rehabilitation and harm reduction? Are gender-specific responses equally important for males and females?

This selected issue is available in print and on the Internet in English only (<http://issues06.emcdda.europa.eu>).



## Chapter 3

# Cannabis

### Supply and availability

#### Production and trafficking

Cannabis continues to be the most widely produced and trafficked plant-based illicit drug worldwide (CND, 2006).

Large-scale production of cannabis resin is concentrated in a few countries, in particular Morocco, but also Pakistan and Afghanistan. Total global production of cannabis resin is estimated to be 7 400 tonnes annually (CND, 2006). Most cannabis resin consumed in the EU originates in Morocco; it is smuggled mainly via the Iberian peninsula, although the Netherlands seems to represent a secondary distribution centre for further transport to EU countries. Cannabis cultivation in Morocco was surveyed for the second time in 2004, and the findings revealed a 10 % decline compared with 2003, largely as a result of intervention by the government. In 2004, the total area under cultivation amounted to 120 500 hectares

in the Rif region, which corresponds to a potential production of 2 760 tonnes of cannabis resin (UNODC and Government of Morocco, 2005).

Other countries also mentioned in 2004 as source countries for the cannabis resin seized in the EU include Albania, Portugal, Senegal, Afghanistan, Pakistan and countries in central Asia (Reitox national reports, 2005; WCO, 2005; INCB, 2006a).

Global potential herbal cannabis production was estimated at over 40 000 tonnes in 2003 (CND, 2005), with source countries throughout the world. Herbal cannabis seized in the EU in 2004 is reported to have originated from a variety of countries, mainly the Netherlands and Albania, but also Angola, South Africa, Jamaica and Thailand (Reitox national reports, 2005; WCO, 2005; INCB, 2006). In addition, local (indoor or outdoor) cultivation and production of cannabis products takes place in most of the EU Member States.

#### Interpreting seizures and other market data

Drug seizures in a country are usually considered an indirect indicator of the supply and availability of drugs, although they also reflect law enforcement resources, priorities and strategies, as well as the vulnerability of traffickers to national and international supply reduction activities, and reporting practices. Quantities seized may fluctuate widely from one year to the next, for example if in one year a few of the seizures are very large. For this reason, the number of seizures is sometimes a better indicator of trends. In all countries, the number of seizures includes a major proportion of small seizures at the retail (street) level. Where known, origin and destination of drugs seized may indicate trafficking routes and producing areas. The price and purity/potency of drugs at retail level are reported by most of the Member States. However, data come from a range of different sources, which are not always comparable, making accurate comparisons between countries difficult.

#### Seizures

Worldwide, a total of 1 471 tonnes of cannabis resin and 6 189 tonnes of herbal cannabis was seized in 2004. Western and central Europe (74 %) and south-west Asia and the Near and Middle East (19 %) continued to account for most cannabis resin seized, while quantities of herbal cannabis seized remained concentrated in North America (54 %) and Africa (31 %) (UNODC, 2006).

In 2004, an estimated 275 000 seizures of cannabis resin amounting to 1 087 tonnes were made in the EU. Most seizures continued to be reported by Spain (which accounts for about half of all seizures and about three quarters of the total quantity seized in the EU), followed by France and the United Kingdom <sup>(40)</sup>. Although the number of resin seizures in the EU as a whole declined between 1999 and 2003, trends in reporting countries indicate an increase at EU level in 2004 <sup>(41)</sup>. The total amount of resin intercepted in the EU

<sup>(40)</sup> This should be checked against missing 2004 data when available. Data on both number of cannabis seizures and quantities of cannabis seized in 2004 were not available for Ireland and the United Kingdom; data on number of cannabis seizures were not available for the Netherlands in 2004. For estimating purposes, 2004 missing data were replaced by 2003 data. Data on quantities seized in 2004 provided by the Netherlands were only estimates, which could not be included in the analysis of trends to 2004.

<sup>(41)</sup> See Table SZR-1 in the 2006 statistical bulletin.



shows a continuous increase over the period 1999–2004, although in 2004 a majority of countries (but not Spain) reported a decline <sup>(42)</sup>.

Herbal cannabis is less seized in the EU; in 2004 there were an estimated 130 000 seizures, amounting to 71 tonnes, with most seizures occurring in the United Kingdom <sup>(43)</sup>. The numbers of herbal cannabis seizures in the EU have increased consistently since 1999 <sup>(44)</sup>, although the quantities seized have been decreasing in reporting countries since 2001 <sup>(45)</sup>. This picture is preliminary as data from the United Kingdom for 2004 are not yet available.

In 2004, an estimated 12 800 seizures in the EU and candidate countries resulted in the recovery of about 22 million cannabis plants and 9.5 tonnes of cannabis plants, with Turkey accounting for the greatest quantities seized <sup>(46)</sup>. The number of seizures of cannabis plants has increased since 1999 and, based upon data from reporting countries, continued to increase in 2004.

### Price and potency

In 2004, the average retail price of cannabis resin in the EU varied from EUR 2.30 per gram in Portugal to over EUR 12 per gram in Norway, while the price of herbal cannabis ranged from EUR 2.70 per gram in Portugal to EUR 11.60 per gram in Malta, with a majority of countries reporting prices for cannabis products of between EUR 5 and EUR 10 per gram <sup>(47)</sup>.

Average prices of cannabis resin, corrected for inflation <sup>(48)</sup>, fell over the period 1999–2004 in all reporting countries <sup>(49)</sup> except Germany and Spain, where prices remained stable, and Luxembourg, where a slight increase occurred. Average prices of herbal cannabis, corrected for inflation <sup>(50)</sup>, of type unspecified or imported, also decreased over the same

period in most of the reporting countries, but remained stable in Spain and the Netherlands and increased in Germany, Latvia, Luxembourg and Portugal. Only two countries, the Netherlands and the United Kingdom, have reported on the average price of locally produced herbal cannabis, and in both cases it has declined.

The potency of cannabis products is determined by their content of delta-9-tetrahydrocannabinol (THC), the primary active constituent (EMCDDA, 2004b). In 2004, the reported average THC content of cannabis resin at retail level varied from less than 1 % (Bulgaria) to 16.9 % (the Netherlands), while herbal cannabis potency ranged from 0.6 % (Poland) to 12.7 % (England and Wales) <sup>(51)</sup>. The potency of locally produced herbal cannabis was reported at 17.7 % in the Netherlands <sup>(52)</sup>.

## Prevalence and patterns of cannabis use

Cannabis is the illegal substance most frequently used in Europe. Its use increased in almost all EU countries during the 1990s, in particular among young people, including school students.

It is estimated that about 65 million European adults, that is about 20 % of those aged 15–64, have tried the substance at least once <sup>(53)</sup>, although it should be remembered that most of these will not be using the substance at the present time. National figures vary widely, ranging from 2 % to 31 %, with the lowest figures in Malta, Bulgaria and Romania, and the highest in Denmark (31 %), Spain (29 %), France (26 %) and the United Kingdom (30 %) <sup>(54)</sup>. Of the 25 countries for which information is available, 13 presented lifetime prevalence rates in the range 10–20 % <sup>(55)</sup>.

<sup>(42)</sup> See Table SZR-2 in the 2006 statistical bulletin.

<sup>(43)</sup> See footnote (40). Data on number of herbal cannabis seizures in 2004 were not available for Poland.

<sup>(44)</sup> See Table SZR-3 in the 2006 statistical bulletin.

<sup>(45)</sup> See Table SZR-4 in the 2006 statistical bulletin.

<sup>(46)</sup> See footnote (40).

<sup>(47)</sup> See Table PPP-1 in the 2006 statistical bulletin.

<sup>(48)</sup> Taking 1999 as the base year for the value of money in all countries.

<sup>(49)</sup> Over the period 1999–2004, data on cannabis resin/herb prices were available for at least three consecutive years in Belgium, the Czech Republic, Germany, Spain, France, Ireland, Cyprus, Latvia, Lithuania, Luxembourg, the Netherlands, Poland, Portugal, Slovenia, Sweden, the United Kingdom, Bulgaria (herb only), Romania, Turkey and Norway. However, trends in the Czech Republic were not analysed due to methodological limitations affecting the data submitted.

<sup>(50)</sup> Taking 1999 as the base year for the value of money in all countries.

<sup>(51)</sup> See Figure PPP-2 in the 2006 statistical bulletin.

<sup>(52)</sup> See Table PPP-5 in the 2006 statistical bulletin.

<sup>(53)</sup> The average proportion was computed as the average of national prevalence rates weighted according to the population of the relevant age group in each country. Total numbers were computed by multiplying prevalence among the population concerned in each country and, in countries for which no information was available, imputing the average prevalence. Figures here are probably a minimum, as there could be some under-reporting.

<sup>(54)</sup> In this text, United Kingdom figures are based on the 2005 British Crime Survey (England and Wales), for practical reasons. There are additional estimates for Scotland, Northern Ireland and a combined estimate for the United Kingdom is available (presented in the statistical bulletin).

<sup>(55)</sup> See Table GPS-1 in the 2006 statistical bulletin.



### Estimating drug use in the population

Cannabis use in the general or school population is assessed through surveys, which provide estimates of the proportion of people that declare having used drugs over defined periods of time: lifetime, last year or last month.

The EMCDDA, in association with national experts, has developed a set of common core items (the 'European model questionnaire', EMQ) for use in adult surveys, and this has been implemented in most EU Member States. Details of the EMQ are included in a handbook for surveys about drug use among the general population (<http://www.emcdda.europa.eu/?nnodeid=1380>). However, there are still differences between countries in methodology and year of data collection, and small differences between countries should be interpreted with caution <sup>(1)</sup>.

'Lifetime use' is of limited value in assessing current drug use among adults (although it is considered to be a reasonable indicator among schoolchildren), but it can provide insight into patterns of use. 'Last year use' and 'last month use' reflect the current situation more accurately, with the latter weighted more heavily towards people who use the drug frequently.

The European school survey project on alcohol and other drugs (ESPAD) is an important source of information on drug and alcohol use among European school students and is invaluable for recording trends over time. ESPAD surveys were conducted in 1995, 1999 and 2003. The next survey will take place in 2007.

ESPAD uses standardised methods and instruments among nationally representative samples of school students aged 15–16 years, to allow comparability of results. Participation in ESPAD has grown with each survey, with 26 European countries participating in 1995, 30 in 1999 and 35 in 2003, including 22 EU Member States and four candidate countries (Bulgaria, Croatia, Romania and Turkey). The survey questions focus on alcohol consumption and use of illicit drugs, with the standard time frames, and frequency of use.

Information on ESPAD and the availability of reports can be found on the ESPAD website ([www.espad.org](http://www.espad.org)).

<sup>(1)</sup> For more information about methodology of population surveys and the methodology used in each national survey, see the 2006 statistical bulletin.

Last year use is clearly lower than lifetime experience. It is estimated that about 22.5 million European adults have used cannabis in the last year, about 7 % of those aged 15–64. National figures range between 1 % and 11 %, with the lowest figures reported by Greece, Malta and Bulgaria, and the highest by Spain (11.3 %), France (9.8 %) and the United Kingdom (9.7 %) <sup>(56)</sup>.

Estimates of last month prevalence will more closely represent regular use of the drug. It is estimated that 12 million European adults have used the drug in the last 30 days, about 4 % of adults. Country figures range between 0.5 % and 7.5 %, a 15-fold difference. The lowest figures were reported from Lithuania, Malta, Sweden and Bulgaria, and the highest from the Czech Republic (4.8 %), Spain (7.6 %) and the United Kingdom (5.6 %) <sup>(57)</sup>.

Use of illegal drugs, including cannabis, is concentrated mainly among young people. In 2004, between 3 % and 44 % of Europeans aged 15–34 reported having tried cannabis, 3–20 % had used it in the last year, and 1.5–13 % had used it in the last month, with the highest figures again coming from the Czech Republic, Spain and the United Kingdom. The European averages for this age group are 32 % for lifetime use, 14 % for last year use (compared with 2 % for 35- to 64-year-olds) and over 7 % for last month use (compared with 1 % for 35- to 64-year-olds) <sup>(58)</sup>.

Cannabis use is even higher among 15- to 24-year-olds, with lifetime prevalence ranging between 3 % and 44 % (most countries report figures in the range 20–40 %), last year use ranging from 4 % to 28 % (in most countries 10–25 %) (Figure 2) and last month use ranging from 1 % to 15 % (in most countries 5–12 %), with higher rates among males than females. In the new Member States levels of cannabis use among young adults aged 15–24 are typically in the same range as those in the EU-15 Member States, but among older age groups rates of use drop substantially <sup>(59)</sup>.

By contrast, in the 2004 US national survey on drug use and health <sup>(60)</sup>, 40.2 % of adults (defined as aged 12 years and older) reported lifetime use, compared with the EU average of about 20 %. This is higher even than in those European countries with the highest lifetime rates (Denmark 31.3 % and the United Kingdom 29.7 %) although differences in last year use estimates are less marked: this figure is 10.6 % in the United States compared with a European average of 7 %,

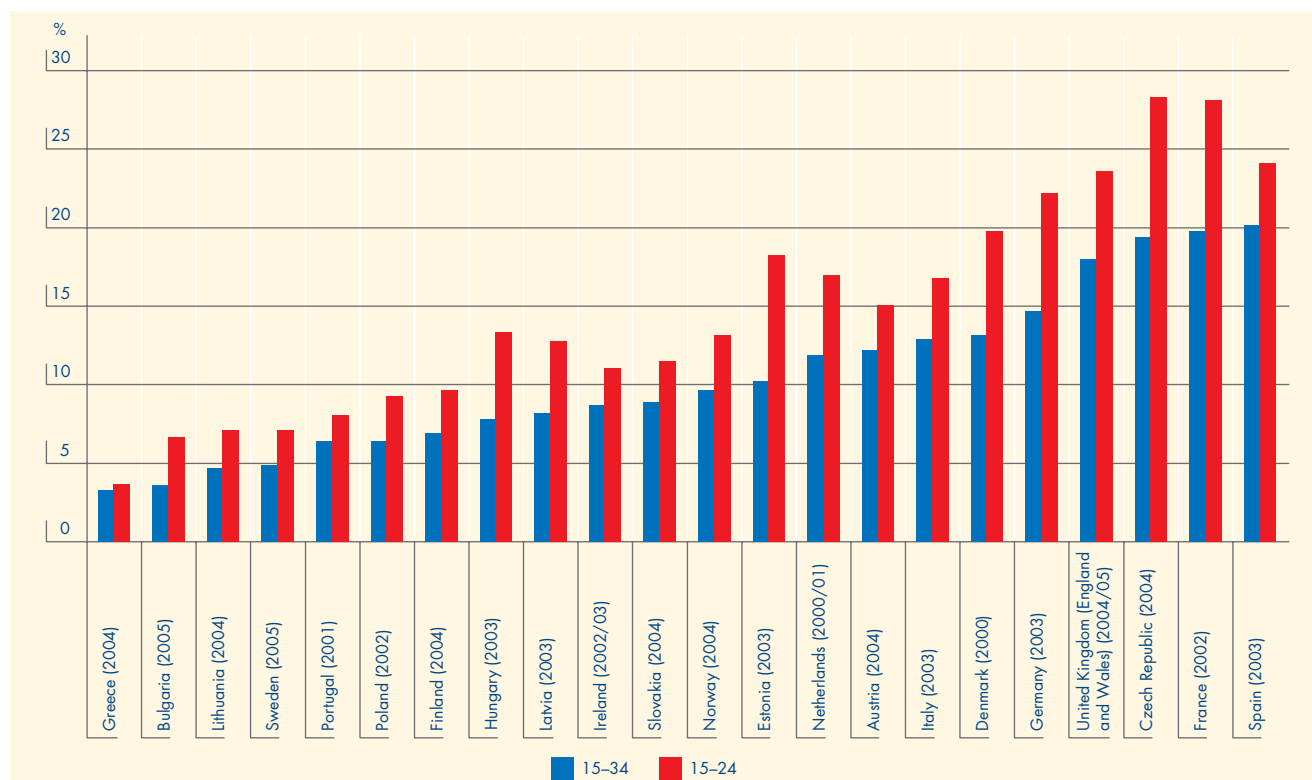
<sup>(56)</sup> See Table GPS-3 in the 2006 statistical bulletin.

<sup>(57)</sup> See Table GPS-5 in the 2006 statistical bulletin.

<sup>(58)</sup> See Tables GPS-2, GPS-4 and GPS-6 in the 2006 statistical bulletin.

<sup>(59)</sup> See Tables GPS-14, GPS-15 and GPS-16 and Figures GPS-2, GPS-3, GPS-11, GPS-12, GPS-13 and GPS-26 in the 2006 statistical bulletin.

<sup>(60)</sup> Source: SAMHSA, Office of Applied Studies, 2004 national survey on drug use and health (<http://oas.samhsa.gov/nsduh.htm#nsduhinfo>). Note that the age range for 'all adults' in the US survey (12 years and over) is wider than the age standard range for European surveys (15–64).

**Figure 2:** Last year prevalence of cannabis use among young adults (aged 15–34 and 15–24)

NB: Data are from the most recent national surveys available in each country at the time of reporting. See Tables GPS-8, GPS-11 and GPS-18 in the 2006 statistical bulletin for further information.

Sources: Reitox national reports (2005), taken from population surveys, reports or scientific articles.

and several European countries reported figures similar to those found in the United States.

Five EU Member States (Belgium, Spain, Italy, Cyprus and the United Kingdom) reported new data from national school surveys, and Bulgaria reported data from school surveys conducted in two major cities. Overall, the picture of cannabis use among school students in Europe remains unchanged. The highest lifetime prevalence of cannabis use among 15- and 16-year-old school students is in the Czech Republic and Spain (44 % and 41 % respectively). Countries where the rate is higher than 25 % include Germany, Italy, the Netherlands, Slovenia and Slovakia (27–28 %) and Belgium, France, Ireland and the United Kingdom, where lifetime prevalence ranges from 32 % to 40 %. The lowest lifetime prevalence estimates (less than 10 %) occur in Greece, Cyprus, Sweden, Romania, Turkey and Norway <sup>(61)</sup>.

Prevalence estimates for 15- to 16-year-old students should not be generalised to older students because large increases in prevalence may occur with small increases in age. Among 17- and 18-year-olds lifetime prevalence estimates reach over 50 % in the Czech Republic, Spain and France <sup>(62)</sup>. And in Sweden, where prevalence is low compared with many other Member States, estimated lifetime use of cannabis among 17- and 18-year-old students, at 14 %, is more than double that among 15- to 16-year-olds (6 %) <sup>(63)</sup>.

### Patterns of cannabis use

Cannabis use tends to be occasional or discontinued some time after its initiation. On average, 33 % of Europeans who have ever tried cannabis have also used it in the last year, whereas only 16 % have used it in the last 30 days. These proportions, known as 'continuation rates', vary across countries, ranging from 20 % to 45 % for last year

<sup>(61)</sup> See Table EYE 1 in the 2006 statistical bulletin.

<sup>(62)</sup> ESCAPAD youth survey including 17- to 18-year-olds not attending school.

<sup>(63)</sup> See Table EYE 3 and Figure EYE 1 (part i) in the 2006 statistical bulletin.

continuation and from 10 % to 25 % for last 30 days continuation <sup>(64)</sup>.

Although cannabis use is largely concentrated among young people, there is some suggestion from data from Spain and the United Kingdom that people may be continuing to use the drug into their 30s or 40s. This could represent an important long-term change in cannabis use patterns that merits further attention.

Use of cannabis, like that of other illegal drugs, is notably higher among males than among females. The difference is more marked in the case of last year or last month use than it is for lifetime use, but the differences are smaller among young people than among older adults (see the selected issue on gender). Cannabis use is also more common in urban areas or areas with a high population density. It has been hypothesised that use may be spreading to smaller towns or rural areas, and Poland documented this trend in its 2005 national report.

Despite increasing concerns about regular or intensive forms of cannabis use <sup>(65)</sup>, there is very limited information

### Health effects of cannabis use

In recent years there has been a surge in the level of concern about potential social and health outcomes of cannabis use. Although the available evidence does not provide a clear-cut understanding of the issues, some conclusions may be drawn. It is, for instance, evident that intensive cannabis use is correlated with mental illness, but the question of co-morbidity is intertwined with the questions of cause and effect. The complexities of this correlation are explored and discussed in a forthcoming EMCDDA monograph.

The fact that intensive cannabis use often co-occurs with non-drug-specific mental problems has practical implications. When forming a treatment plan for cannabis users it may be difficult for clinicians to know whether to start with the drug use or the mental health problem. Studies of the effects of treatment for problem cannabis use are still scarce, and the few that exist cover only specific psychosocial treatments. All other treatment modalities have either not been studied at all or insufficiently studied; thus evidence for efficacy and effectiveness is lacking.

at European level. A crude estimate drawn in the 2004 annual report (EMCDDA, 2004a) suggests that 1 % of European adults, about 3 million people, could be daily or almost daily cannabis users. Several countries reported increases in regular or intensive cannabis use, but only Spain reported similar data on daily use, with an increase between 1997–99 (0.7–0.8 % of adults) and 2001 (1.5 %), followed by stabilisation in 2003 (1.5 %). It would be valuable to have information from other countries and by specific age groups (e.g. 15–24 years). The French 2003 ESCAPAD study found that 14 % of 17- to 18-year-olds (9 % of girls and 18 % of boys) could be considered to be at risk of problem use, according to a specific scale (CAST). Other countries are also working on scales to assess intensive forms of cannabis use (Germany, Netherlands, Poland and Portugal), and the EMCDDA is promoting collaboration in this area.

### Trends in cannabis use among adults

Tracking long-term trends in drug use in Europe is made difficult by the absence of reliable time-series data. However, an increasing number of countries have launched surveys from the early 1990s onwards, and some of these are now beginning to provide valuable insights into trends over time.

It is generally considered that cannabis use started to spread in some European countries in the 1960s and became popular in the 1970s and 1980s. Recent national surveys show significant lifetime experience among 45- to 54-year-olds in Denmark, Germany, Spain, France, the Netherlands, Sweden and the United Kingdom, suggesting significant cannabis initiation during the late 1960s and 1970s. An analysis of initiation to cannabis use found a marked expansion of use in Spain during the 1970s, in Germany (West) during the 1980s and in Greece during the 1990s <sup>(66)</sup>. Swedish data document a relatively high level of experimentation in the 1970s among conscripts (15–20 %).

National or local household, conscript and school surveys have shown that cannabis use increased markedly during the 1990s in almost all EU countries, particularly among young people. This increase has continued until recently in almost all countries, although there are signs of stabilisation or even decreases in some cases.

<sup>(64)</sup> See Figure GPS-24 in the 2006 statistical bulletin.

<sup>(65)</sup> There is as yet no universally accepted definition of 'intensive cannabis use'; rather the definition varies across different studies. It is, however, a broad term meaning use of cannabis that exceeds a certain threshold of frequency. It does not necessarily imply the existence of 'dependence/abuse' or other problems, but it is considered to increase the risk of negative consequences, including dependence. In this chapter, figures refer to 'daily or almost daily use' (defined as use on 20 or more days out of the last 30 days). This benchmark has often been used in studies and can be derived from the European model questionnaire. Risk of dependency among less frequent users is lower.

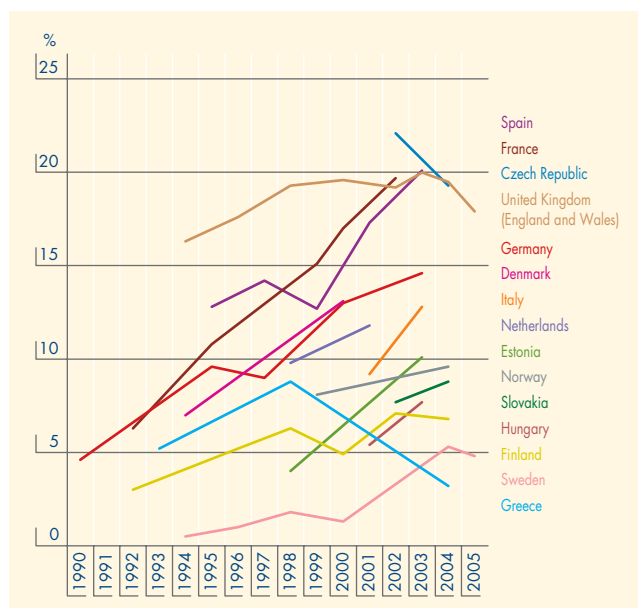
<sup>(66)</sup> See Figure 4 in the 2004 annual report.

In the United Kingdom, recent cannabis use among young adults (aged 15–34) was the highest in Europe in the early 1990s but slowly declined from 1998 to 2004/05 <sup>(67)</sup>, while in Spain and France rates have recently (2002 or 2003) reached those found in the United Kingdom (Figure 3). Similar high prevalence levels are also reported for the Czech Republic.

Levels of use are lower in Denmark, Germany, Estonia, Italy, the Netherlands and Slovakia, but all these countries have reported increases in last year use among young adults, as has Hungary, although to a lesser extent. It should be noted that the Danish (2000) and Dutch (2001) data are now relatively old and the current situation is therefore less clear.

In Finland and Sweden prevalence rates are relatively low but also appear to be increasing; however, the difference observed in Sweden between 2000 (1.3 %) and 2004 (5.3 %) is difficult to interpret because of methodological changes <sup>(68)</sup>.

**Figure 3:** Trends in last year prevalence of cannabis use among young adults (aged 15–34)



NB: Data are from the most recent national surveys available in each country at the time of reporting. See Table GPS-4 in the 2006 statistical bulletin for further information.

Sources: Reitox national reports (2005), taken from population surveys, reports or scientific articles.

Estimates of last month prevalence also generally increased in the past decade, although pronounced increases occurred only in Belgium and Spain. The United Kingdom has recently reported a decrease in last month use, having previously presented the highest levels in Europe since the early 1990s. In addition, Slovakia reported a decrease between 2002 and 2004. In the Czech Republic and France it was not possible to assess the trend.

In addition, school surveys can give valuable information about trends in drug use among the younger members of the population, which may predict future trends among young adults. In most countries, since 1995, there has been an overall increase in the number of school students who have ever tried cannabis. However, geographical variations in trends are marked. Trends in lifetime prevalence of cannabis use among school students aged 15–16 years can be categorised into three geographical groups. In Ireland and the United Kingdom, which have long histories of cannabis use, lifetime prevalence is high but has remained stable during the last decade (around 37–39 %). In the eastern and central European Member States, together with Denmark, Spain, France, Italy and Portugal, lifetime prevalence of cannabis use in 2003 was substantially higher than it was in 1995. In the third group of Member States (Finland and Sweden in the north and Greece, Cyprus and Malta in the south) plus Norway, estimates of lifetime prevalence among school students have remained at relatively low levels (around 10 % and below) <sup>(69)</sup>.

## Treatment demand data <sup>(70)</sup>

Among the total of approximately 380 000 treatment demands reported in 2004 (data from 19 countries available), cannabis was the primary reason for referral to treatment in about 15 % of all cases, making it the next most commonly reported drug after heroin <sup>(71)</sup>.

Overall, cannabis is also the second most frequently cited drug in reports on those entering treatment for the first time, representing 27 % of new clients reported in 2004, although there are considerable variations between countries with cannabis being cited by only less than 5 % of new clients in Lithuania, Malta and Romania but by more than 40 % of new clients in Denmark, Germany, Hungary and Finland <sup>(72)</sup>.

<sup>(67)</sup> Since 1994, the first year with information based on the British Crime Survey for England and Wales.

<sup>(68)</sup> See Figures GPS-4 and GPS-14 in the 2006 statistical bulletin.

<sup>(69)</sup> See Table EYE-5 (part i) and Figure EYE-1 (part ii) in the 2006 statistical bulletin.

<sup>(70)</sup> The analysis of the general distribution and the trends is based on the data on clients demanding treatment in all treatment centres; the analysis of the profile of clients and the patterns of drug use is based on the data from outpatient treatment centres. A specific analysis on gender breakdown can be found in the selected issue on gender published with the 2006 EMCDDA annual report.

<sup>(71)</sup> See Figure TDI-2 in the 2006 statistical bulletin.

<sup>(72)</sup> See Table TDI-4 (part ii) in the 2006 statistical bulletin.

Over the period 1999–2004, the proportion of all new clients seeking treatment for cannabis increased in most countries that reported data <sup>(73)</sup>.

In almost all countries for which data are available, the proportion of new clients reported as seeking treatment for cannabis use is higher than the proportion of all clients; in a few countries the proportions are roughly equal <sup>(74)</sup>. The greatest demand for treatment for cannabis use is in outpatient settings <sup>(75)</sup>.

A number of factors are likely to be associated with the increased demand for cannabis treatment, and this remains an area requiring research scrutiny. Possible reasons for an increase include an escalation in intensive cannabis use and related problems in the population, an increased perception of the risks of cannabis use, an increase in the number of referrals to treatment from the criminal justice system, clearly important in some countries, and changes in the reporting system and/or its coverage <sup>(76)</sup>.

Overall, cannabis clients can be divided into three groups: those who use it occasionally (34 %), those using it once to several times a week (32 %) and those using it daily (34 %). There are marked differences between countries in the frequency of cannabis use among new clients, with the highest proportion of daily cannabis users being reported in the Netherlands and Denmark and the highest proportions of occasional users or those who have not used cannabis in the month prior to treatment being found in Germany, Greece and Hungary. This variation probably reflects differences in referral to treatment (e.g. more referrals from the criminal justice system or from social networks) <sup>(77)</sup>.

The extent to which cannabis users in treatment meet diagnostic criteria for either dependence or harmful drug use is an important question. Currently, this is an area requiring further investigation. As referral practices differ between countries, there is a need for studies to document the differing clinical characteristics of those receiving treatment for cannabis use.

Some clients seek treatment for cannabis use in combination with other drug or alcohol problems, and sometimes the request for treatment is related to more general problems, such as conduct disorder among young people. Furthermore,

some recent studies also report that there has been an increase in adolescents seeking treatment for cannabis use who have coexisting mental health problems, and that this may be an important factor influencing demand for treatment <sup>(78)</sup>.

It is also important to understand better the needs of cannabis users at the population level. The EMCDDA estimates there are around 3 million intensive cannabis users (defined as daily or almost daily cannabis use) in the EU. Although the number of these requiring interventions is unknown, the number of cannabis-related treatment demands is small in relation to this figure.

The available data suggest that cannabis clients in outpatient treatment centres tend to be relatively young: virtually all cannabis clients new to treatment are under 30 years old. Teenagers in specialised drug treatment are more likely to be recorded as having a primary cannabis problem than are clients in other age groups, with cannabis accounting for 75 % of treatment demands among those younger than 15 years and 63 % among those aged 15–19 years <sup>(79)</sup>.

Most clients report having first used cannabis when in the youngest age groups, with 36.8 % using the drug for the first time before the age of 15. Almost no one seeking treatment reports having used cannabis for the first time after the age of 29 years <sup>(80)</sup>.

## Prevention

Well-implemented universal prevention programmes can delay or reduce the initiation of young people into the use of substances such as tobacco, alcohol and cannabis. The importance of this is underlined by evidence that early-onset users (pre- to mid-adolescence) have a significantly higher risk of developing drug problems, including dependence (Von Sydow et al., 2002; Chen et al., 2005). An additional consideration in striving to prevent or delay the onset of initiation into cannabis use is the fact that adolescents are more vulnerable to cannabis toxicity.

The profiles of young cannabis users, at least in the early stages of consumption, do not differ from those of young alcohol or tobacco users. This supports the idea that universal

<sup>(73)</sup> See Figure TDI-1 in the 2006 statistical bulletin.

<sup>(74)</sup> See Tables TDI-3 (part iii) and TDI-4 (part iii) in the 2006 statistical bulletin.

<sup>(75)</sup> See Table TDI-25 in the 2006 statistical bulletin.

<sup>(76)</sup> An EMCDDA monograph on cannabis will be published in 2007; three chapters of the monograph will target the issue of the increase in cannabis treatment demand.

<sup>(77)</sup> See Table TDI-18 in the 2006 statistical bulletin.

<sup>(78)</sup> <http://www.addaction.org.uk/Drugcannabis.htm#top>

<sup>(79)</sup> See Table TDI-10 (part i) and (part ii) in the 2006 statistical bulletin.

<sup>(80)</sup> See Table TDI-11 (part ii) and (part ix) in the 2006 statistical bulletin.

prevention for young people should not focus on cannabis alone, but should be aimed at preventing use of alcohol and tobacco too.

Gender is an important issue in cannabis prevention (see the selected issue on gender). Boys are at more risk of progression to more intensive use, perhaps because girls are more responsive to parental disapproval and are more cautious in the selection of their peers. However, this is changing as the traditional roles of males and females change in modern societies. In several European countries projects aimed at preventing cannabis as well as alcohol use (Bagmaendene, Denmark; Beer-Group, Germany; and Risflecting, Austria) attempt to address boys' lack of communication skills. It is known that one reason for intensive consumption of alcohol and cannabis among boys is that they find it difficult to approach girls, and thus these projects offer training in flirting.

Selective prevention in schools targets risk factors associated with drug use such as early school leaving, antisocial behaviour, academic underachievement, low bonding, and infrequent attendance at school and impaired learning because of drug use.

The German project Stoned at School aims to train teachers in early detection and early intervention, prevention of cannabis consumption, and establishing contact between schools and drug counselling facilities. Like similar projects in Austria, it is a 10-module training scheme to increase teachers' awareness of cannabis consumption and identify pupils at risk.

Specific drug counselling centres are frequent in Germany, France and the Netherlands. Since January 2005, more than 250 'cannabis consultation' clinics have been set up throughout the French territories. Aimed at teenagers who are experiencing difficulties as a result of their use of cannabis or other drugs, as well as their parents, these facilities are anonymous, free and open to all. They are located in the major French cities for easy access. Consultations are carried out by professionals trained in the use of evaluation tools and brief interventions that deal with addictions, and are also able to identify social, medical or psychiatric services appropriate for clients needing specialised care. This new type of structure is to be subjected a follow-up study. The first

available data from the first two or three months of operation show attendance figures of 3 500–4 000 individuals per month, of whom 2 000–2 500 were cannabis users (the others being parents, relatives and youth workers). Alternative strategies are to offer short but structured courses with around 10 group sessions (Germany, Denmark, the Netherlands, Austria). An accompanying manual, SKOLL (self-control training), has been launched by a Dutch–German Euregio project.

Often, cannabis-specific 'training courses' rely on the fact that cannabis use or possession is illegal and participants are referred via the criminal justice system. Motivation to participate largely comes from the fact that attendance at such courses is an obligatory part of a judicial sentence. Nonetheless, these methods enable contact to be established with at least part of the group at risk.

Many European selective prevention interventions tend towards the provision of information on cannabis. Several more evidence-based approaches, including normative restructuring (e.g. learning that most peers disapprove of use), assertiveness training, motivation and goal-setting, as well as myth correction (on value associations with cannabis), have yet to become established as standard elements of cannabis prevention programmes. A recent meta-analysis of prevention programmes for vulnerable young people (Roe and Becker, 2005) found that information-based approaches have little or no impact on consumption behaviours or attitudes, whether in universal prevention or selective prevention. The same authors found that comprehensive social influence programmes have an important effect on vulnerable young people.

An important point emerging from the few available evaluations of European selective cannabis prevention projects (FRED, Way-Out, Sports for Immigrants and others; see above and EDDRA at <http://eddra.emcdda.europa.eu>) is the efficacy of comprehensive social influence techniques. Among the positive effects achieved by these techniques are a reduction in consumption levels, an increase in the self-perception of problem use, a reduction in the main risk factors and associated problems, as well as increased self-control and motivation.



### Brief intervention for cannabis users

Brief intervention is an approach that aims to make people reflect on their use of drugs and to provide them with skills to control it. The concept is largely based on motivational interviewing, a non-judgemental, non-confrontational approach that explores the client's values, objectives, self-assessment of use and gives feedback on discrepancies between the client's self-image and actual status.

Brief intervention is often targeted at an early stage of a person's alcohol or drug use to prevent the development of serious drug problems later on. There is evidence for the effectiveness of brief intervention in preventing alcohol and tobacco misuse, and there is growing interest in the value of this approach for other substances.

Brief intervention has been found to be very useful in selective prevention measures targeted at cannabis users who would not normally come into contact with treatment settings. In the case of intensive cannabis users, education-based programmes that emphasise abstinence may not be effective.

Brief interventions are cost-effective and may be particularly appropriate to cannabis users, as they are found to work well with drug users who:

- are experiencing few problems with their drug use;
- have low levels of dependence;
- have a short history of drug use;
- have stable backgrounds (social, academic, family);
- are unsure or ambivalent about changing their drug use.

This kind of approach is now used in several countries, including Germany, the Netherlands, Austria and the United Kingdom, where interventions may take the form of counselling, 'cannabis courses' or even self-help websites. For example, the German website-based counselling programme, *Quit the Shit* ([www.drugcom.de](http://www.drugcom.de)), is an innovative approach, using telematics, for cannabis users who want to reduce or stop their drug use. Similar websites with self-help components include [www.jellinek.nl/zelfhulp/cannabis/frameset.html](http://www.jellinek.nl/zelfhulp/cannabis/frameset.html) by Jellinek (the Netherlands) and [www.knowcannabis.org.uk/](http://www.knowcannabis.org.uk/) by HIT (United Kingdom).





## Chapter 4

# Amphetamines, ecstasy and other psychotropic drugs

In many European countries the second most commonly used illegal substance is some form of synthetically produced drug. The use of these substances among the general population is typically low, but prevalence rates among younger age groups are significantly higher, and in some social settings or cultural groups the use of these drugs may be particularly high. Globally, amphetamines (amphetamine and methamphetamine) and ecstasy are among the most prevalent synthetic drugs.

Amphetamine and methamphetamine are central nervous system stimulants. Of the two drugs, amphetamine is by far the more commonly available in Europe. Worldwide, increasing levels of use of methamphetamine are a cause for considerable concern, as the drug is associated with a range of severe health problems. Within Europe, significant methamphetamine use appears to be restricted to the Czech Republic.

Ecstasy refers to synthetic substances that are chemically related to amphetamines but which differ to some extent in their effects. The best-known member of the ecstasy group of drugs is 3,4-methylenedioxy-methamphetamine (MDMA), but other analogues are also occasionally found in ecstasy tablets (MDA, MDEA, etc.). These drugs are sometimes known as entactogens, a reference to their very specific mood-altering effects. Sometimes they provoke effects more typically associated with hallucinogenic substances.

Historically, lysergic acid diethylamide (LSD) has been by far the best-known hallucinogenic drug, but overall consumption levels have been low and somewhat stable for a considerable time. Recently, evidence of increased availability and use of naturally occurring hallucinogenic substances, hallucinogenic mushrooms in particular, has emerged.

To detect new drugs emerging on the European drug scene, the EU has in place an early-warning system. This system also monitors potentially harmful new trends in the use of psychoactive substances.

## Supply and availability <sup>(81)</sup>

The production of amphetamines and ecstasy is difficult to quantify because 'it starts with readily available chemicals, in easily concealed laboratories' (UNODC, 2003a). The most recent estimate of annual global production of amphetamines and ecstasy is about 520 tonnes (UNODC, 2003b). Global seizures of these substances peaked in 2000 at 46 tonnes. Following a decline in 2001 and 2002, seizures increased again to 34 tonnes in 2003, and declined slightly to 29 tonnes in 2004. In 2004, the share of global amphetamines and ecstasy seizures accounted for by methamphetamine fell to 38 % (from 66 % in 2003), with ecstasy accounting for 29 % and amphetamine 20 % (CND, 2006).

## Amphetamine

Worldwide, amphetamine production remains concentrated in western and central Europe, in particular in Belgium, the Netherlands and Poland. In this subregion, Estonia, Lithuania and Bulgaria also play a significant role in the illicit manufacture of amphetamine, and to a lesser extent Germany, Spain and Norway, as shown by the dismantling of amphetamine laboratories in 2004 in these countries (UNODC, 2006) <sup>(82)</sup>. Outside Europe, amphetamine is mainly manufactured in North America and Oceania (CND, 2006). Trafficking in amphetamine in 2004 remained mainly intraregional. Most amphetamine found on European illicit markets comes from Belgium, the Netherlands and Poland, and also from Estonia and Lithuania (in the Nordic countries) (Reitox national reports, 2005; WCO, 2005).

Of the six tonnes of amphetamine seized worldwide in 2004, about 97 % was seized in Europe, mostly in western/central Europe and south-eastern Europe (accounting respectively for 67 % and 26 % of the global amount seized) (CND, 2006).

In 2004, an estimated 33 000 seizures of amphetamine, amounting to 5.2 tonnes and 9.6 million units, were made in the EU. In terms of number of seizures and weight of

<sup>(81)</sup> See 'Interpreting seizures and other market data', p. 37.

<sup>(82)</sup> The number of laboratories dismantled reported in different countries reflects, in addition to the number of production sites, law enforcement activities and priorities as well as reporting practices.

amphetamine seized, the United Kingdom has consistently been the main amphetamine-seizing country in the EU <sup>(83)</sup>. Turkey reported the interception of 9.5 million units of amphetamine in 2004. Despite some fluctuations, at EU level both the overall number of amphetamine seizures <sup>(84)</sup> and quantities seized <sup>(85)</sup> have increased since 1999 and, based on the findings from reporting countries, this upward trend seems to have continued in 2004.

In 2004, the average retail price of amphetamine ranged from EUR 4 per gram in Slovenia to EUR 64 per gram in Malta <sup>(86)</sup>. Over the period 1999–2004, amphetamine prices, corrected for inflation <sup>(87)</sup>, decreased overall in Germany, Spain, Ireland, Latvia, Lithuania, Sweden, the United Kingdom, Bulgaria, Turkey and Norway <sup>(88)</sup>.

The average purity of amphetamine in 2004 varied from 5–6 % in Bulgaria to 44 % in Norway <sup>(89)</sup>. Available data <sup>(90)</sup> on average amphetamine purity for the period 1999–2004 reveal overall downward trends in Latvia, Lithuania, Luxembourg, Finland and Norway and upward trends in Belgium, Germany, France, Italy, Hungary and Austria.

## Methamphetamine

Worldwide, in terms of quantities manufactured and trafficked, methamphetamine continues to be more important than amphetamine or ecstasy, although its share in global seizures fell in 2004. It continues to be mostly manufactured in East and South-East Asia (China, the Philippines, Myanmar, Thailand), followed by North and Central America (United States, Canada, Mexico). In 2004, 11 tonnes of methamphetamine was seized worldwide, of which 59 % was seized in East and South-East Asia and 37 % in North America (CND, 2006). In Europe, production of methamphetamine is largely limited to the Czech Republic,

where it has been produced since the mid-1980s under the local name of 'pervitin'. In 2004, however, manufacture was also reported in Slovakia and Bulgaria, where laboratories were dismantled (Reitox national reports, 2005; UNODC, 2006). Most of the Czech production of methamphetamine is destined for the local market, although some is smuggled to Germany, Austria and Slovakia (Reitox national reports, 2005). In 2004, methamphetamine seizures were reported in Belgium, the Czech Republic, Denmark, Estonia, Greece, France, Latvia, Lithuania, Hungary, Austria, Slovakia, Sweden, Romania and Norway, the last accounting for both the highest number of seizures and the greatest quantities recovered <sup>(91)</sup>.

In 2004, the price <sup>(92)</sup> of methamphetamine at retail level in the Czech Republic was reported to vary between EUR 12 and EUR 63 per gram, while its average purity <sup>(93)</sup> ranged between 43 % in Slovakia and 50 % in the Czech Republic.

## Ecstasy

Globally, Europe remains the main centre of ecstasy production, although its relative importance appears to be declining as ecstasy manufacture has spread in recent years to other parts of the world, notably to North America (United States, Canada) and East and South-East Asia (China, Indonesia, Hong Kong) (CND, 2006; UNODC, 2006). Although the Netherlands remained in 2004 the main source of ecstasy for Europe and the world as a whole, ecstasy laboratories were also uncovered in Belgium, Estonia, Spain and Norway (Reitox national reports, 2005; UNODC, 2006). The ecstasy seized in the EU is reported to originate from the Netherlands and Belgium, and to a lesser extent Poland and the United Kingdom (Reitox national reports, 2005).

<sup>(83)</sup> This situation should be checked against 2004 data for the United Kingdom when available. Data on both number of amphetamine seizures and quantities of amphetamine seized in 2004 were not available for Ireland and the United Kingdom; data on quantities of amphetamine seized were not available for Slovenia in 2004; data on number of amphetamine seizures were not available for the Netherlands in 2004. For estimating purposes, 2004 missing data were replaced by 2003 data. Data on quantities seized in 2004 provided by the Netherlands were only estimates, which could not be included in the analysis of trends to 2004.

<sup>(84)</sup> See Table SZR-11 in the 2006 statistical bulletin.

<sup>(85)</sup> See Table SZR-12 in the 2006 statistical bulletin.

<sup>(86)</sup> See Table PPP-4 in the 2006 statistical bulletin.

<sup>(87)</sup> Taking 1999 as the base year for the value of money in all countries.

<sup>(88)</sup> Over the period 1999–2004, data on amphetamine prices were available for at least three consecutive years in Belgium, Germany, Spain, France, Ireland, Latvia, Lithuania, Poland, Sweden, the United Kingdom, Bulgaria, Turkey and Norway.

<sup>(89)</sup> See Table PPP-8 in the 2006 statistical bulletin. Note that the reported average levels of amphetamine purity may conceal wide variation in the purity of samples analysed.

<sup>(90)</sup> Over the period 1999–2004, data on amphetamine purity were available for at least three consecutive years in Belgium, Germany, Estonia, France, Italy, Latvia, Lithuania, Luxembourg, Hungary, the Netherlands, Poland, Portugal, Finland, the United Kingdom, Turkey and Norway.

<sup>(91)</sup> Data for 2004 provided by Germany, Italy, Luxembourg and the Netherlands do not allow methamphetamine and amphetamine seizures to be distinguished, while Ireland and the United Kingdom did not provide 2004 data on drug seizures, making it difficult to know whether any methamphetamine seizures occurred in these five countries in 2004.

<sup>(92)</sup> See Table PPP-4 in the 2006 statistical bulletin.

<sup>(93)</sup> See Table PPP-8 in the 2006 statistical bulletin.

Ecstasy trafficking is still strongly concentrated in western Europe, although, like production, it has spread throughout the world in recent years. Of the 8.5 tonnes (weight equivalent) of ecstasy seized globally in 2004, 50 % was recovered in western and central Europe, 23 % in North America and 16 % in Oceania (CND, 2006).

An estimated 24 000 seizures led to the confiscation of about 28.3 million ecstasy tablets in the EU in 2004. Up to 2003, the largest quantities of ecstasy were seized by the United Kingdom, followed by Germany, France and the Netherlands <sup>(94)</sup>.

After a rapid increase over the period 1999–2001, the number of ecstasy seizures <sup>(95)</sup> at EU level declined in 2002–03; but data from reporting countries indicate an increase again in 2004. Quantities of ecstasy <sup>(96)</sup> intercepted increased from 1999 to 2002; after a steep decline to a low point in 2003, the available data for 2004 suggest that they again reached the 2002 level.

In 2004, the average retail cost of ecstasy tablets ranged from less than EUR 3 each in Lithuania and Poland to EUR 15–25 in Greece and Italy <sup>(97)</sup>. During 1999–2004, average retail prices of ecstasy, corrected for inflation <sup>(98)</sup>, fell in most reporting countries <sup>(99)</sup>.

Generally in Europe, most tablets sold as ecstasy contained MDMA or another ecstasy-like substance (MDEA, MDA), usually as the only psychoactive substance present. In the Czech Republic, Greece, Latvia, Lithuania, Hungary, the Netherlands, Slovakia, Finland, the United Kingdom and Norway, such tablets accounted for more than 95 % of the

total number of tablets analysed in 2004. An exception to this finding occurred in Bulgaria, where a high percentage (61 %) of tablets analysed contained amphetamine and/or methamphetamine as the only psychoactive substances. The MDMA content of ecstasy tablets varies greatly between batches (even between those with the same logo) both between and within countries. In 2004, the average content of active substance (MDMA) per ecstasy tablet was reported to range from 30 to 82 mg <sup>(100)</sup> (Reitox national reports, 2005).

## LSD

LSD is manufactured and trafficked to a much smaller extent than other synthetic drugs. In 2004, an estimated 700 seizures of 220 000 LSD units were made in the EU. Since 2002, Germany has been the country seizing the largest quantities of LSD per year, followed by the United Kingdom <sup>(101)</sup>. Between 1999 and 2002, at EU level, both the number of LSD seizures <sup>(102)</sup> and quantities seized <sup>(103)</sup> decreased. However, in both 2003 and 2004, the available data suggest that numbers of LSD seizures and amounts intercepted increased for the first time in nine years, with relatively large amounts of the drug seized in Germany, France, Lithuania, the Netherlands and Poland in 2004.

In 2004, the average cost to users of an LSD unit ranged from EUR 2.50 in Portugal to EUR 11.60 in Malta <sup>(104)</sup>. Average prices of LSD, corrected for inflation <sup>(105)</sup>, showed an overall downward trend <sup>(106)</sup> between 1999 and 2004 in the Czech Republic, Ireland, Poland, Slovenia and Sweden, but increased in Germany and France.

<sup>(94)</sup> This situation should be checked against 2004 data for the United Kingdom when available. Data on both number of ecstasy seizures and quantities of ecstasy seized in 2004 were not available for Ireland and the United Kingdom; data on number of ecstasy seizures were not available for the Netherlands in 2004. For estimating purposes, 2004 missing data were replaced by 2003 data. Data on quantities seized in 2004 provided by the Netherlands were only estimates, which could not be included in the analysis of trends to 2004.

<sup>(95)</sup> See Table SZR-13 in the 2006 statistical bulletin.

<sup>(96)</sup> See Table SZR-14 in the 2006 statistical bulletin.

<sup>(97)</sup> See Table PPP-4 in the 2006 statistical bulletin.

<sup>(98)</sup> Taking 1999 as the base year for the value of money in all countries.

<sup>(99)</sup> Over the period 1999–2004, data on ecstasy prices were available for at least three consecutive years in Belgium, Czech Republic, Germany, Spain, France, Ireland, Cyprus, Latvia, Lithuania, Luxembourg, Poland, Portugal, Slovenia, Sweden, the United Kingdom, Bulgaria, Turkey and Norway.

<sup>(100)</sup> This range is based on data from a few countries only, namely Denmark, Germany, France, Luxembourg and the Netherlands.

<sup>(101)</sup> This situation should be checked against 2004 data for the United Kingdom when available. Data on both the number of LSD seizures and quantities of LSD seized in 2004 were not available for Ireland and the United Kingdom; data on the number of LSD seizures seized were not available for Cyprus, the Netherlands, Poland and Bulgaria. For estimating purposes, 2004 missing data were replaced by 2003 data. Data on quantities seized in 2004 provided by the Netherlands were only estimates, which could not be included in the analysis of trends to 2004.

<sup>(102)</sup> See Table SZR-15 in the 2006 statistical bulletin.

<sup>(103)</sup> See Table SZR-16 in the 2006 statistical bulletin.

<sup>(104)</sup> See Table PPP-4 in the 2006 statistical bulletin.

<sup>(105)</sup> Taking 1999 as the base year for the value of money in all countries.

<sup>(106)</sup> Over the period 1999–2004, data on LSD prices were available for at least three consecutive years in the Czech Republic, Germany, Spain, France, Ireland, Lithuania, Poland, Portugal, Slovenia, Sweden, the United Kingdom, Romania and Norway.

## International action against production and trafficking of amphetamines and ecstasy

In the area of synthetic drugs, Europol has been running Project Synergy since December 2004 <sup>(107)</sup>. It is supported by 20 EU Member States and some third countries, and includes an analytical work file (AWF) with operational sub-projects carried out throughout the EU across several countries, as well as a number of instruments used for analytical and strategic purposes, such as the Europol ecstasy logo system (EELS) (including the ecstasy logo catalogue) and the Europol illicit laboratory comparison system (ELICS). Europol continues to support the CHAIN project <sup>(108)</sup> on amphetamine profiling and the European Joint Unit on Precursors (EJUP). Besides on-the-spot expert assistance in dismantling illicit synthetic drug production, recent sub-projects have focused on comparing the laboratories dismantled, on uncovering chemical dump sites as starting points for investigations, on back-tracking tablet machines, and on investigating trafficking in precursor chemicals to the EU countries.

Project Prism is the international initiative set up to prevent the diversion of precursor chemicals used in the illicit manufacture of synthetic drugs, through a system of pre-export notifications for licit trade to the International Narcotics Control Board (INCB) and the reporting of shipments stopped and seizures made when suspicious transactions occur.

Ephedrine and pseudo-ephedrine are key precursors for methamphetamine, while 1-phenyl-2-propanone (P-2-P) is also used to manufacture amphetamine; 3,4-methylenedioxyphenyl-2-propanone (3,4-MDP-2-P), safrole and safrole-rich oils are used in the illicit manufacture of MDMA, while piperonal is also used to synthesise MDA <sup>(109)</sup>.

Licit trade of ephedrine and pseudo-ephedrine amounted to a total of 526 and 1 207 tonnes respectively in 2004. The largest seizures of these chemicals were reported in North America and South-East Asia, but there is concern that seizures have spread to all regions. Smuggling of ephedrine and pseudo-ephedrine to Europe originates mainly in western Asia. In 2004, 2.6 tonnes of ephedrine and 1 kg of pseudo-ephedrine were seized in Europe <sup>(110)</sup>; the seizures were mostly small seizures and came from many different laboratories, a majority in the Czech Republic, although

there was a large seizure in Greece of ephedrine from Pakistan.

The activities of Project Prism in Europe have focused on preventing the smuggling of 3,4-MDP-2-P and P-2-P into the EU for use in the illicit manufacture of MDMA and amphetamine respectively. In 2004, seizures of 3,4-MDP-2-P and P-2-P were the largest ever reported globally, Europe accounting for the greatest quantities of 3,4-MDP-2-P seized and the United States for the greatest quantities of P-2-P seized. In 2004, seizures in Europe totalled 10 161 litres of 3,4-MDP-2-P (mostly in the Netherlands and Belgium) and 9 297 litres of P-2-P (mostly in Poland and the Netherlands) <sup>(111)</sup>.

Piperonal has many licit uses but may also be used as a precursor in the manufacture of 3,4-MDP-2-P, MDA or MDMA (INCB, 2006b). Between November 2004 and October 2005, over 150 shipments of 3 800 tonnes were reported to the INCB (2006b). In 2004, the greatest seizures of piperonal were reported by China (13 tonnes); 2.4 tonnes was seized in Europe, nearly all of it in Romania <sup>(112)</sup>.

Seizures of safrole are reported from all regions worldwide but quantities remain small, except in China, which reports seizures over 100 kg. In Europe 122 litres of safrole was seized in 2004, mainly in Latvia but also in Lithuania.

## Prevalence and patterns of use

Traditionally, population surveys have shown that, next to cannabis, amphetamines and ecstasy are the illegal substances most commonly used, albeit the overall prevalence of their use is lower than that of cannabis. Use of ecstasy became popular during the 1990s, whereas amphetamines have been used for much longer.

Among EU Member States, use of amphetamines <sup>(113)</sup> and ecstasy appears to be relatively high in only a few countries, namely the Czech Republic, Estonia and the United Kingdom.

Recent surveys among the adult population (15–64 years) report that lifetime prevalence of amphetamine use in Europe ranges from 0.1 % to 5.9 %, except in the United Kingdom (England and Wales), where it reaches 11.2 %. On average about 3.1 % of all European adults have used amphetamines at least once. After the United Kingdom, the

<sup>(107)</sup> Project Synergy merged Projects CASE and Genesis, which commenced in 2002.

<sup>(108)</sup> The 'collaborative harmonised amphetamine initiative' (CHAIN) is a forensic profiling initiative which has superseded the CASE pilot project.

<sup>(109)</sup> All scheduled under Table I of the 1988 convention.

<sup>(110)</sup> Seizure data do not include quantities involved in stopped shipments.

<sup>(111)</sup> Seizure data do not include quantities involved in stopped shipments.

<sup>(112)</sup> Seizure data do not include quantities involved in stopped shipments.

<sup>(113)</sup> Within the framework of population surveys, data on 'amphetamine use' include use of both 'amphetamine' and 'methamphetamine' under one category.

countries with the next highest figures are Denmark (5.9 %), Norway (3.6 %) and Germany (3.4 %). Last year use is much lower: 0.6 % on average (range 0–1.4 %). Based on general population surveys, it has been estimated that almost 10 million Europeans have tried this substance, and more than 2 million will have used amphetamine in the previous 12 months <sup>(114)</sup>.

Among young adults (15–34 years) experience of amphetamine use is reported by 0.1–9.6 %, with the United Kingdom (England and Wales) reporting a lifetime prevalence rate of 16.5 % (which may reflect a historical phenomenon, see below). Half of the countries providing data have prevalence rates below 4 %, with the highest rates after the United Kingdom reported by Denmark (9.6 %), Norway (5.9 %) and Germany (5.4 %). An average of 4.8 % of young Europeans have tried amphetamine. Denmark (3.1 %) and Estonia (2.9 %) report the highest last year prevalence rates <sup>(115)</sup>. It is estimated that, on average, 1.4 % of young Europeans have used amphetamine in the last year (see also Figure 4).

Ecstasy has been tried by 0.2–7.1 % of all adults (average 2.6 %). Half of the countries report prevalence rates of 1.8 % or lower, with highest prevalence rates being reported by the Czech Republic (7.1 %) and the United Kingdom (6.7 %). The prevalence of last year use of ecstasy ranges from 0.2 % to 3.5 %, but half of the countries report prevalence rates of 0.5 % or below. It has been estimated that almost 8.5 million Europeans have tried ecstasy, and almost 3 million have used it in the last year.

Among young adults across the European countries, the prevalence of lifetime use of ecstasy is 5.2 %, ranging from 0.5 % to 14.6 %, although rates of less than 3.6 % are reported by half of the countries. The Czech Republic (14.6 %), the United Kingdom (12.7 %) and Spain (8.3 %) report the highest prevalence rates.

Ecstasy use is predominantly a youth phenomenon. In the 15–24 years age group, lifetime use ranges from 0.4 % to 18.7 %, with the highest figures reported by the Czech Republic (18.7 %) <sup>(116)</sup> and the United Kingdom (10.7 %), and with higher rates among males (0.3–23.2 %) than among females (0.4–13.9 %). Use in the last year ranges

from 0.3 % to 12 %, with the Czech Republic (12 %) and Estonia (6.1 %) reporting the highest figures (Figure 5). Last month prevalence rates lower than 3 % are reported by seven countries. Prevalence rates are typically higher in urban areas, and in particular among people frequenting discos, clubs or dancing events (see the selected issue on drug use in recreational settings).

Among 15- to 16-year-old school students, surveys show that overall lifetime prevalence of ecstasy use increased over the period 1995–2003, with the greatest increases occurring in the Czech Republic and most of the new EU Member States <sup>(117)</sup>. In the 2003 ESPAD school surveys (Hibell et al., 2004), lifetime prevalence estimates for amphetamines remained between 1 % and 3 % higher than those for ecstasy in six Member States (Germany, Denmark, Estonia, Lithuania, Austria and Poland) <sup>(118)</sup>.

For comparison, in the 2004 US national survey on drug use and health, 4.6 % of adults (defined as 12 years and older) reported lifetime experience with ecstasy and 0.8 % reported last year use (the corresponding figures for the EU are 2.6 % and 0.9 %). Among young adults aged 16–34 years, lifetime experience was 11.3 %, and last year use 2.2 % (5.2 % and 1.9 % respectively in Europe) <sup>(119)</sup>.

Lifetime experience of the use of LSD among adults ranges from 0.2 % to 5.9 %, with two thirds of countries reporting prevalence rates between 0.4 % and 1.7 %. Among young adults (15–34 years), lifetime prevalence of LSD use ranges from 0.3 % to 9 %, and among the 15–24 years age group it does not exceed 4.5 %. The prevalence of last year use of this drug in the 15–24 years age group is over 1 % only in the Czech Republic, Estonia, Latvia, Hungary, Poland and Bulgaria.

## Trends

There is evidence from new population surveys that amphetamine and ecstasy consumption, which has shown an increasing trend in recent years, may be stabilising or even decreasing. In the United Kingdom, as well as in two other Member States where consumption of these drugs has been relatively high (the Czech Republic and Spain), last year use of amphetamines among young adults is now reported to be

<sup>(114)</sup> For the method of computation see footnote (53).

<sup>(115)</sup> See Figures GPS-15 and GPS-16 in the 2006 statistical bulletin.

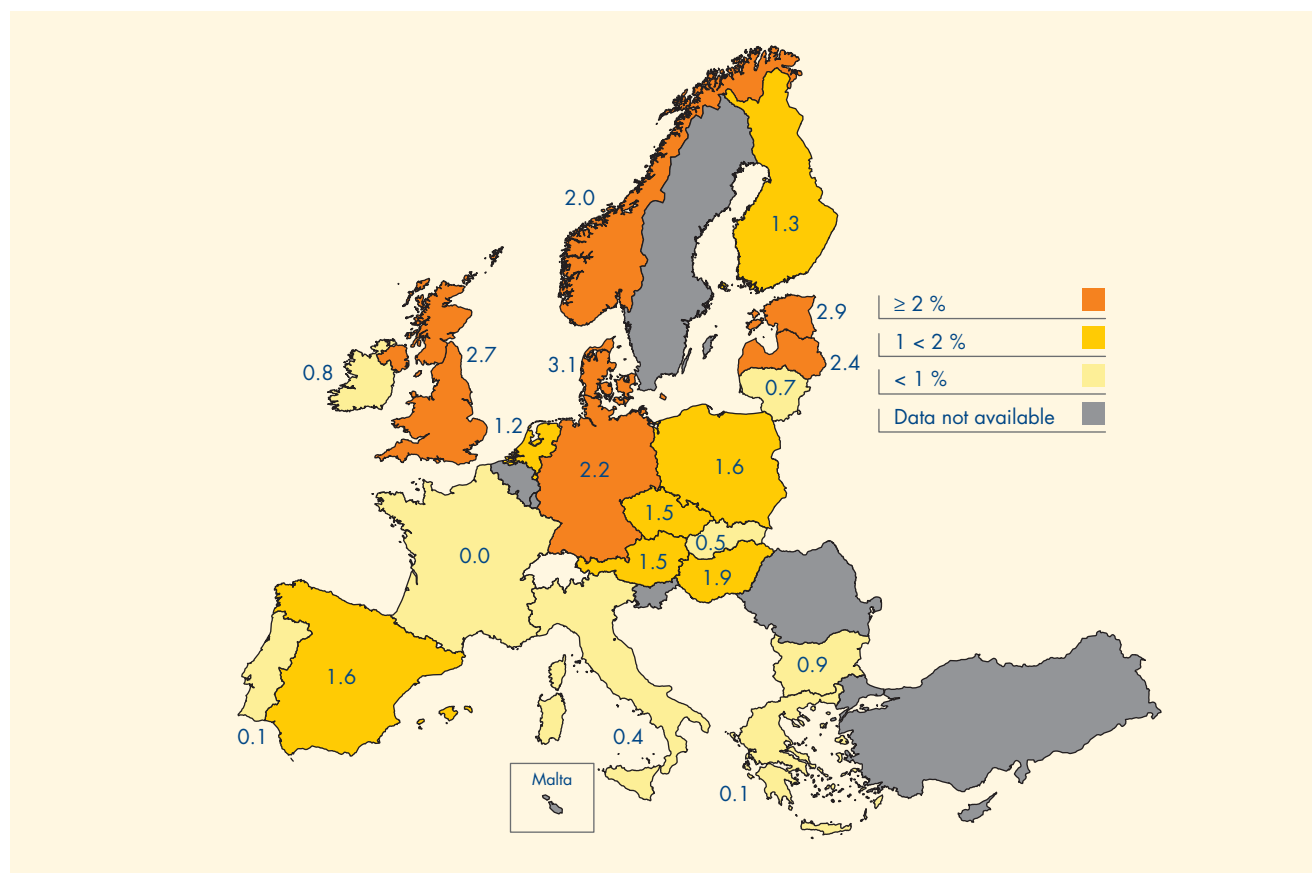
<sup>(116)</sup> In the Czech Republic, the age group surveyed was 18–24 years.

<sup>(117)</sup> See Figure EYE-2 (part i) in the 2006 statistical bulletin.

<sup>(118)</sup> See Figure EYE-2 (part vi) in the 2006 statistical bulletin.

<sup>(119)</sup> Source: SAMHSA, Office of Applied Studies, 2004 national survey on drug use and health (<http://oas.samhsa.gov/nsduh.htm#nsduhinfo>). Note that the age range in the US survey (12 years and over) is wider than the age range reported by the EMCDDA for EU surveys (15–64 years). The figures for 'young adults' (16–34 years) for the US survey were recomputed by the EMCDDA.



**Figure 4:** Last year prevalence of amphetamine use among young adults (aged 15–34)

NB: Data are from the most recent national surveys available in each country at the time of reporting. See Tables GPS-8 and GPS-11 in the 2006 statistical bulletin for further information.

Sources: Reitox national reports (2005), taken from population surveys, reports or scientific articles.

stabilising or even decreasing <sup>(120)</sup>. And, similarly, ecstasy use appears to be levelling off or even declining in two high-prevalence countries, Spain and the United Kingdom, although not in the Czech Republic <sup>(121)</sup>.

## Treatment demand data — amphetamines and ecstasy <sup>(122)</sup>

Although the number of demands for treatment relating to the use of amphetamines and ecstasy is increasing, in general, this form of drug use is rarely the primary reason for attending drug treatment in most countries <sup>(123)</sup>. An important exception is that a few countries do report a substantial proportion of treatment requests related to amphetamine

or methamphetamine use. In the Czech Republic, Slovakia, Finland and Sweden these drugs account for anything from a quarter to around a half of all treatment demands <sup>(124)</sup>. In the Czech Republic and Slovakia, a large proportion of reported treatment demands relate to a primary methamphetamine problem (see box on methamphetamine). In those countries where amphetamines users account for a substantial portion of treatment requests, between one third and two thirds of amphetamines clients inject the drug <sup>(125)</sup>.

Demands for treatment related to ecstasy use are reported to account for less than 1 % of all treatment demands in most countries, with the exception of Cyprus, Hungary, Ireland and Turkey, where ecstasy clients constitute between 4 % and 6 % of all clients seeking treatment.

<sup>(120)</sup> See Figures GPS-6 and GPS-17 in the 2006 statistical bulletin.

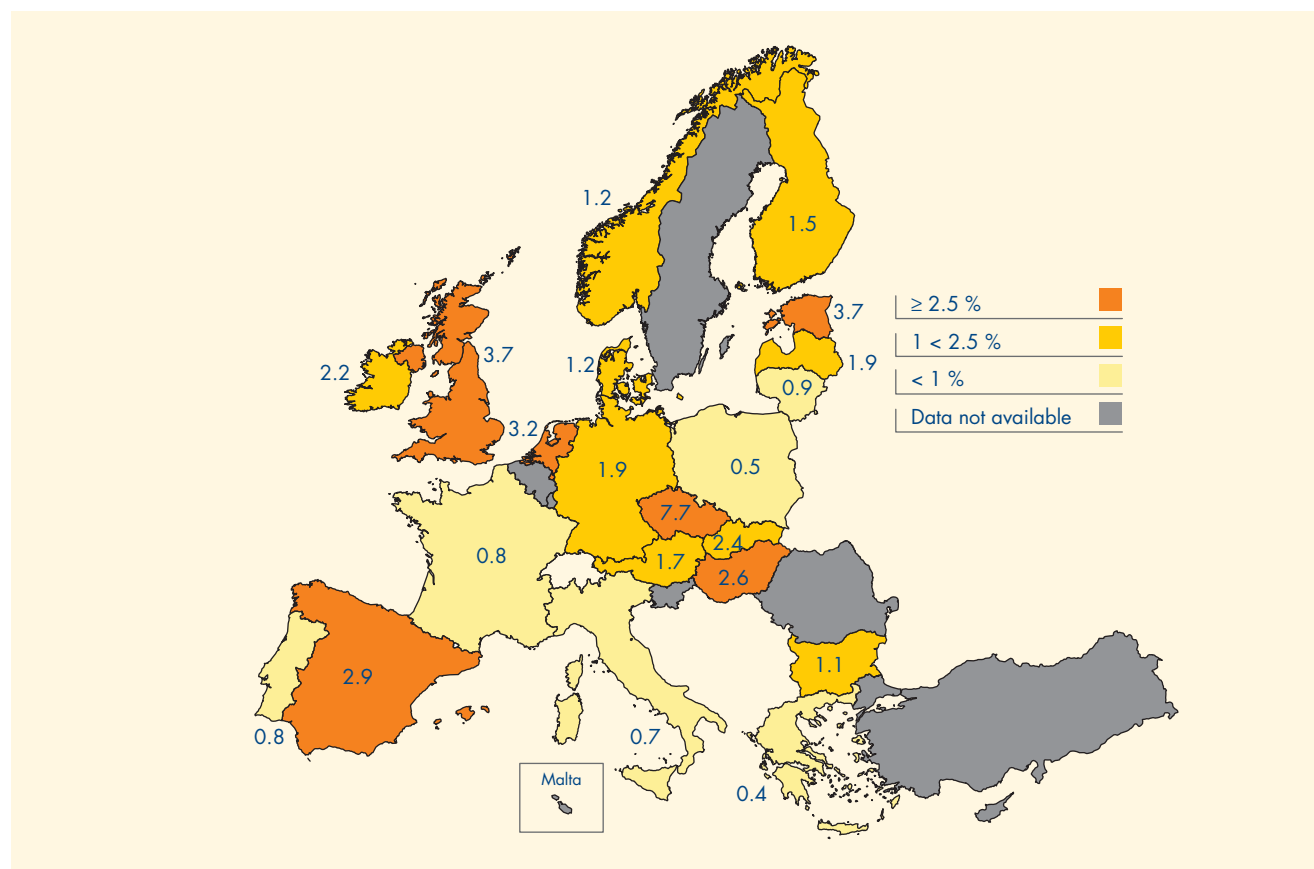
<sup>(121)</sup> See Figures GPS-8, GPS-18 and GPS-30 in the 2006 statistical bulletin.

<sup>(122)</sup> See footnote (70).

<sup>(123)</sup> See Figure TDI-1 in the 2006 statistical bulletin.

<sup>(124)</sup> See Table TDI-5 in the 2006 statistical bulletin.

<sup>(125)</sup> See Table TDI-17 (part iii) in the 2006 statistical bulletin.

**Figure 5:** Last year prevalence of ecstasy use among young adults (aged 15–34)

NB: Data are from the most recent national surveys available in each country at the time of reporting. See Tables GPS-8 and GPS-11 in the 2006 statistical bulletin for further information.

Sources: Reitox national reports (2005), taken from population surveys, reports or scientific articles.

### Methamphetamine use and related problems

Significant problems with methamphetamine use have been reported in many parts of the world, including the USA, South-East Asia and the Pacific, and Africa (UNODC, 2006). Methamphetamine use can lead to serious medical problems, including psychosis and dependence, and may be associated with risky behaviours, including some that could lead to HIV transmission.

Historically, methamphetamine use in Europe has been concentrated in the Czech Republic, where there are estimated to be twice as many problem methamphetamine (pervitin) users (20 300) as problem opioid users (9 700). In recent years,

methamphetamine has become the most frequent primary drug among those demanding treatment for the first time in Slovakia, and high levels of methamphetamine use have also been found among some subpopulations in Hungary. In their 2005 Reitox reports, seven other countries (Denmark, France, Latvia, Slovenia, the United Kingdom, Bulgaria and Norway) reported an increase in seizures and/or use of this drug, mainly among frequent attendees at clubs and parties. Currently, the available information does not allow us to draw any firm conclusions on trends in methamphetamine use in these countries. Nevertheless, the spread of methamphetamine elsewhere in the world and the potential for this drug to cause significant health problems means that this is an area in which continued vigilance is required.

## New and emerging drug trends

Prevalence estimates for the use of new or emerging drugs are much lower than those for the use of more established illicit drugs. New forms of drug use are likely to be adopted initially by a few individuals, among small subpopulations or in limited geographical locations or settings. Consequently, the identification and monitoring of emerging trends demands a different type of approach from that used for monitoring the main types of drug use.

### Hallucinogenic mushrooms: an emerging trend case study

Until recently, LSD was the most commonly used hallucinogenic substance. This may now be changing as the use of hallucinogenic mushrooms <sup>(126)</sup> has become increasingly reported. The availability of hallucinogenic mushrooms appears to have increased since the late 1990s, when they began to be marketed alongside other 'natural' products in 'smart shops' in the Netherlands and elsewhere <sup>(127)</sup>. For example, in the United Kingdom, during the early 2000s, the number of shops selling hallucinogenic mushrooms increased, and by 2005 it was estimated that they were being sold in about 300 shops and market stalls across the country. The sale of hallucinogenic mushrooms through the Internet also emerged, with sites, mainly based in the Netherlands, selling fresh mushrooms, growing kits and spore prints. Online marketing of hallucinogenic mushrooms is conducted in a variety of languages, mainly English, French and German, implying a wide international consumer base.

Recent adult and school population surveys in the EU indicate that, among young people aged 15–24 years, lifetime use of hallucinogenic mushrooms ranges from less than 1 % to 8 % <sup>(128)</sup>. Lifetime prevalence estimates for the use of hallucinogenic mushrooms among school students aged 15–16 years are equal to, or higher than, lifetime prevalence estimates for ecstasy use in nine of the EU Member States (Hibell et al., 2004). However, there are indications that continuation rates are lower for hallucinogenic mushrooms than for most other drugs. This is a common feature of hallucinogenic drug use and reflects the fact that young people generally choose to confine this type of drug use

to experimenting and rarely go on to develop patterns of regular use.

Reports about acute or chronic health problems requiring medical interventions relating to the use of hallucinogenic mushrooms are rare. However, some countries changed their laws in response to the use of such hallucinogenic substances by young people. Although the active ingredients of mushrooms, psilocybin and psilocin, are already controlled at international level by the 1971 UN Convention on Psychotropic Substances, until recently it has often been left to prosecutors to interpret whether and when these substances are prohibited when inside a mushroom, to avoid penalising the owners of land on which such mushrooms grow naturally. Six countries have tightened up their legislation on mushrooms in the last five years (Denmark, Germany, Estonia, Ireland, the Netherlands and the United Kingdom). The changes made by these countries extend prohibition to include hallucinogenic mushrooms, although legal controls do not always apply to exactly the same mushrooms or states of preparation.

In 2004, seizures of hallucinogenic mushrooms were reported in the Czech Republic, Germany, Estonia, Greece, Lithuania, Hungary, the Netherlands, Poland, Portugal, Slovenia, Slovakia, Sweden and Norway <sup>(129)</sup>. The number and quantity of law enforcement seizures of hallucinogenic mushrooms are generally low and no clear trends emerge from these data.

### GHB and ketamine

Both gamma-hydroxybutyrate (GHB) and ketamine are being monitored following EU concerns arising in 2000 about the misuse of these drugs for recreational purposes <sup>(130)</sup>. In March 2001 the UN drug control system added GHB to the list of internationally controlled drugs, and as a result all EU Member States have been updating their legislation on this substance. More recently, in March 2006, the INCB recommended that the WHO expedite its review to determine whether ketamine should be placed under international control (INCB, 2006a). At national level, ketamine is controlled under drug legislation, as opposed to medicine regulations, in almost half of the EU Member States.

<sup>(126)</sup> In this report, the term hallucinogenic mushrooms refers only to fungi containing the psychoactive substances psilocybin and psilocin. Species of fungi containing other psychoactive substances are more rarely used. See the EMCDDA thematic paper on hallucinogenic mushrooms for more information ([www.emcdda.europa.eu/?nnodeid=400](http://www.emcdda.europa.eu/?nnodeid=400)).

<sup>(127)</sup> These shops sell legal and predominantly natural products, including hallucinogenic mushrooms.

<sup>(128)</sup> EMCDDA data from the European model questionnaire. Eleven Member States provide data on hallucinogenic mushrooms (Czech Republic, Denmark, Germany, France, Ireland, Lithuania, Hungary, Netherlands, Poland, Finland, United Kingdom).

<sup>(129)</sup> Reitox national reports (Germany, Estonia, the Netherlands, Norway) and EMCDDA early-warning system network questionnaire (Czech Republic, Greece, Hungary, Poland, Portugal, Slovenia, Slovakia, Sweden).

<sup>(130)</sup> Joint action risk assessment report 2000.



The shortage of prevalence data on GHB and ketamine suggests that use of these substances has stabilised at low levels in most countries. Studies of high-prevalence populations suggest that even among regular recreational drug users both of these drugs may be less commonly used than other substances such as amphetamines, ecstasy, LSD and hallucinogenic mushrooms.

Deaths and non-fatal emergencies reported to be associated with the use of GHB and ketamine are very rare. However, the absence of accurate and comparable systems for recording deaths and non-fatal emergencies related to the use of these substances limits the data available in this area. Two countries have reported deaths related to GHB, usually in association with other drugs. The municipal health service in Amsterdam recorded an increase in the annual number of non-fatal emergencies attributable to the use of GHB from 25 in 2000 to 98 in 2004, more than the number of medical emergencies attributed to use of ecstasy, amphetamine, LSD or hallucinogenic mushrooms. In Sweden, detections of GHB (or its precursors GBL and 1,4-BD) in body fluid specimens increased from 24 in 1997 to 367 in 2004. Deaths associated with GHB have also been reported in Sweden: between 1996 and 2004 the drug was detected in 36 drug-related deaths, with nine of these occurring in 2004. In England and Wales in 2003, GHB was mentioned in the coroner's report of three deaths, in one of which GHB was the only drug mentioned (ONS, 2006). However, toxicological information from one hospital in the United Kingdom, covering a large region, indicates that GHB was detected in five deaths between May and December 2005 <sup>(131)</sup>.

As GHB is water/alcohol-soluble, and because of its potentially incapacitating effects, often followed by amnesia, there have been concerns that it is being used in drug-facilitated sexual assaults (so-called 'date rapes'). However, as cases may remain unreported, and because forensic evidence is scarce and such crimes are difficult to prove, there is no sound evidence on the extent of this phenomenon. Further research is therefore needed to determine the nature and extent of this potentially worrying development.

## Action on new drugs

There was a smooth transition, with no disruption in information exchange, in 2005 when the 1997 joint action was superseded by the new Council Decision

(2005/387/JHA). A total of 14 new psychoactive substances were officially notified for the first time to the EMCDDA and Europol. They are all psychotropic (synthetic) drugs, similar to those listed in Schedules I and II of the 1971 UN Convention on Psychotropic Substances. The newly notified substances belonged to three major chemical groups — phenethylamines, tryptamines and piperazines. Various substances from these groups have been previously notified through, and are currently being monitored by, the early-warning system (EWS) <sup>(132)</sup>.

The most significant new development in 2005 was the appearance and rapid spread of the new psychoactive

### Council decision on new psychoactive substances

Council Decision 2005/387/JHA of 10 May 2005 on the information exchange, risk assessment and control of new psychoactive substances <sup>(1)</sup> establishes a mechanism for the rapid exchange of information on new psychoactive substances that may pose public health and social threat, thus allowing the EU institutions and Member States to act on both new narcotic and new psychotropic drugs that appear on the European drug scene. The EMCDDA and Europol, in close cooperation with their networks — the Reitox national focal points (NFPs) and Europol national units (ENUs) respectively — have been assigned a central role in detecting and notifying new psychoactive substances. The decision also provides for an assessment of the risks associated with these new substances so that measures applicable in the Member States for the control of narcotic and psychotropic substances <sup>(2)</sup> can also be applied to new psychoactive substances if appropriate. The decision broadens the scope of, and replaces, the 1997 joint action <sup>(3)</sup>, which was devoted exclusively to new synthetic drugs. The decision, however, maintains the three-step approach piloted by the joint action: information exchange/early warning, risk assessment and decision-making.

<sup>(1)</sup> Council Decision 2005/387/JHA on information exchange, risk assessment and control of new psychoactive substances was published in the *Official Journal of the European Union* (OJ L 127, 20.5.2005, pp. 32–37) and took effect on 21 May 2005. The decision applies to substances currently not listed in any of the schedules to the 1961 and 1971 UN drug control conventions.

<sup>(2)</sup> In compliance with the provisions of the 1961 UN Single Convention on Narcotic Drugs and the 1971 UN Convention on Psychotropic Substances.

<sup>(3)</sup> Joint action of 16 June 1997 concerning the information exchange, risk assessment and control of new synthetic drugs (OJ L 167, 25.6.1997).

<sup>(131)</sup> Information from the EWS. The relatively high number of deaths related to GHB in this report is likely to reflect the research interest in GHB by the hospital laboratory.

<sup>(132)</sup> Of the nine new synthetic drugs that underwent risk assessment between 1997 and 2004 under the joint action, all six substances that were subsequently controlled at EU level were phenethylamines.

substance 1-(3-chlorophenyl)piperazine (mCPP). mCPP is an aryl-substituted piperazine, as is benzylpiperazine (BZP), a substance monitored by the EWS since 1999. The first official notifications of the detection of mCPP were received by the EMCDDA and Europol in February/March 2005, concerning samples collected in France and Sweden. By the end of 2005, mCPP-containing tablets had been seized by the law enforcement authorities or found in the context of various recreational activities (open-air dance/music festivals, dance clubs, etc.) in almost all Member States. They are almost always designed to look like, and presumably marketed as, ecstasy. The drug is chiefly available in tablet form, and the subjective effects of mCPP and MDMA are partially comparable (Bossong et al., 2005). In addition, mCPP is often found in combination with MDMA. Since this is unlikely to be the result of accidental contamination, it suggests that the deliberate addition of

mCPP may be intended to potentiate or modify the effects of MDMA. There seems to be little specific demand or market for mCPP in its own right in the EU.

Since the EWS started to monitor new (synthetic) drugs in 1997, mCPP has been more widely identified by Member States than any other new psychoactive substance. It has been identified within the space of a year in 20 Member States as well as in Romania and Norway.

In a joint report, the EMCDDA and Europol recommended, in line with the provisions of the Council decision, that no formal risk assessment be carried out as there is evidence that mCPP is used in the manufacture of at least one medicinal product. However, it was also noted that, despite the fact that at present there is little evidence of significant public health or social risks related to mCPP, this question must remain open in the absence of a thorough scientific risk assessment.

#### **Developments in drug use within recreational settings, in EMCDDA 2006 annual report: selected issues**

Drug use and the recreational activities of young people are often linked. In particular, studies targeted at young people attending music and dance events consistently report much higher prevalence estimates for drug use than those found in general population surveys, with particularly high levels of stimulant drug use often being reported. Can differences between countries be explained in terms of the variety of commercial nightlife settings available, music culture, drug availability and disposable incomes? These questions are explored in this selected issue.

New developments in the promotion of recreational drugs via the Internet and in recreational drug use itself bring with them new challenges in the fields of policy, prevention and risk reduction. These are explored in this selected issue, which also reviews in detail the innovative drug prevention and risk reduction initiatives that have been introduced in the EU over the past decade in response to the complex problem of the interaction of leisure activities and drug use by young people.

This selected issue is available in print and on the Internet in English only (<http://issues06.emcdda.europa.eu>).



## Chapter 5

### Cocaine and crack cocaine

#### Cocaine supply and availability <sup>(133)</sup>

##### Production and trafficking

Cocaine is the most trafficked drug in the world after herbal cannabis and cannabis resin. In terms of volume seized — 578 tonnes worldwide in 2004 — trafficking continued to be predominantly in South America (44 %) and North America (34 %), followed by western and central Europe (15 %) (CND, 2006).

Colombia is by far the largest source of illicit coca in the world, followed by Peru and Bolivia. Global production of cocaine in 2004 is estimated to have increased to 687 tonnes, of which Colombia contributed 56 %, Peru 28 % and Bolivia 16 % (UNODC, 2005). Most of the cocaine seized in Europe comes directly from South America (mainly Colombia) or via Central America and the Caribbean. In 2004, Suriname, Brazil, Argentina, Venezuela, Ecuador, Curaçao, Jamaica, Mexico, Guyana and Panama were reported as transit countries for cocaine imported into the EU (Reitox national reports, 2005; WCO, 2005; CND, 2006; INCB, 2006a; Europol, 2006). Some also passed through Africa, increasingly through western Africa and countries in the Gulf of Guinea (mainly Nigeria), but also eastern Africa (Kenya) and north-western Africa through the islands off the coast of Mauritania and Senegal (CND, 2006; INCB, 2006a). The main points of entry in the EU remain Spain, the Netherlands and Portugal, as well as Belgium, France and the United Kingdom (Reitox national reports, 2005; CND, 2006; Europol, 2006). Although Spain and the Netherlands still play an important role as distribution points for the

cocaine entering the EU, the intensified controls along the Spanish north coast (Galicia) and the 100 % controls policy on flights from specific countries <sup>(134)</sup> at Schiphol Airport (Amsterdam) may have played a part in the development of alternative routes, increasingly, for example, via Africa, but also via eastern and central Europe and secondary distribution from there to western Europe (Reitox national reports, 2005; WCO, 2005; INCB, 2006a).

##### Seizures

In 2004, an estimated 60 000 seizures of 74 tonnes of cocaine were made in the EU. Most seizures of cocaine are reported in western European countries, especially Spain, which accounts for about half the seizures and amounts recovered in the EU in the last five years <sup>(135)</sup>. Over the period 1999–2004, the number of cocaine seizures <sup>(136)</sup> increased overall at EU level, while quantities <sup>(137)</sup> seized fluctuated within an upward trend. However, based on reporting countries, quantities appear to have declined in 2004 — perhaps in comparison with the exceptional amount recovered in Spain the year before.

##### Price and purity

In 2004, the average retail price of cocaine varied widely across the EU, from EUR 41 per gram in Belgium to over EUR 100 per gram in Cyprus, Romania and Norway <sup>(138)</sup>. The average prices of cocaine, corrected for inflation <sup>(139)</sup>, showed an overall downward trend over the period 1999–2004 in all reporting countries <sup>(140)</sup> except Luxembourg, where it declined

<sup>(133)</sup> See 'Interpreting seizures and other market data', p. 37.

<sup>(134)</sup> All flights from the Netherlands Antilles, Aruba, Suriname, Peru, Venezuela and Ecuador are 100 % controlled; in 2004, 3 466 drug couriers were arrested as a result of such controls and 620 as a result of regular controls (Dutch national report).

<sup>(135)</sup> This should be checked against missing 2004 data when available. Data on both number of cocaine seizures and quantities of cocaine seized in 2004 were not available for Ireland and the United Kingdom; data on number of cocaine seizures were not available for the Netherlands in 2004. For estimating purposes, 2004 missing data were replaced by 2003 data. Data on quantities seized in 2004 provided by the Netherlands were only estimates, which could not be included in the analysis of trends to 2004.

<sup>(136)</sup> See Table SZR-9 in the 2006 statistical bulletin.

<sup>(137)</sup> See Table SZR-10 in the 2006 statistical bulletin.

<sup>(138)</sup> See Table PPP-3 in the 2006 statistical bulletin.

<sup>(139)</sup> Taking 1999 as the base year for the value of money in all countries.

<sup>(140)</sup> Over the period 1999–2004, data on cocaine prices were available for at least three consecutive years in Belgium, the Czech Republic, Germany, Spain, France, Ireland, Cyprus, Latvia, Lithuania, Luxembourg, Poland, Portugal, Slovenia, Sweden, the United Kingdom, Bulgaria, Turkey and Norway.

until 2002 and then increased, and Norway, where prices rose sharply in 2001 and then stabilised.

Compared with heroin, the average purity of cocaine at user level is high, varying in 2004 from 24 % in Denmark to 80 % in Poland, with most countries reporting purities of 40–65 % <sup>(141)</sup>. Data available for 1999–2004 indicate an overall decrease in the average purity of cocaine in most reporting countries <sup>(142)</sup>, although it increased in Estonia (since 2003), France and Lithuania, and remained stable in Luxembourg and Austria.

### International action against cocaine production and trafficking

Project COLA, run by Europol, aims at identifying and targeting Latin American and associated criminal groups operating towards and within the EU and engaged primarily in the trafficking of cocaine. In particular, it provides operational support to live investigations in participating Member States and enhances the strategic intelligence picture. It is complemented by the Europol cocaine logo system, which collates, in an annually updated catalogue, *modi operandi* and photographic and other information on cocaine seizures and on logos/markings on the drugs and their packaging, in order to identify matches between seizures and promote international law enforcement cooperation and information exchange (Europol, 2006).

Operation Purple, running since 1999, is designed to prevent the diversion of potassium permanganate <sup>(143)</sup> from licit trade for use in the illicit manufacture of cocaine, in particular in the Americas. The licit trade in potassium permanganate is large: since 1999, 30 exporting countries/territories have provided 4 380 pre-export notifications to the INCB involving over 136 560 tonnes of potassium permanganate. Since 1999, 233 shipments involving over 14 316 tonnes of the substance have been stopped or seized because of concerns over the legitimacy of the orders or the end-users, and diversions were identified. In 2004, 1.4 tonnes of potassium permanganate was seized in Europe, mainly in the Russian Federation, followed by Romania and Ukraine <sup>(144)</sup> (INCB, 2006b).

Traffickers appear to have found ways to avoid controls and monitoring mechanisms introduced under Operation Purple. Indeed, although the illicit manufacture of cocaine

is not associated with Asia, there is growing concern that traffickers may be targeting the region for diverting potassium permanganate from licit trade. There is also concern that traffickers may be diverting potassium permanganate to the Andean subregion through the Caribbean islands. Thus, while acknowledging some success in identifying suspicious transactions and in stopping shipments, the INCB (2006b) has urged governments to develop operating procedures to backtrack information from cocaine laboratory seizures in order to trace the chemicals back to the source, identify transit countries and investigate trade companies, so that traffickers may experience more difficulties in relocating their activities.

### Prevalence and patterns of cocaine use

Based on recent national population surveys, it is estimated that about 10 million Europeans <sup>(145)</sup> have tried cocaine at least once (lifetime prevalence), representing over 3 % of all adults <sup>(146)</sup>. National figures on reported use range between 0.5 % and 6 %, with Italy (4.6 %), Spain (5.9 %) and the United Kingdom (6.1 %) at the upper end of this range. It is estimated that about 3.5 million adults have used cocaine in the last year, representing 1 % of all adults. National figures in most countries range between 0.3 % and 1 %, although prevalence levels are higher in Spain (2.7 %) and the United Kingdom (2 %).

As with other illegal drugs, cocaine use is concentrated among young adults. Lifetime experience is highest among young adults aged 15–34 years, although last year use is slightly higher among 15- to 24-year-olds. Cocaine seems to be predominantly a drug used by those in their 20s, but, compared with cannabis use, cocaine use is less concentrated among younger people. Lifetime experience among 15- to 34-year-olds ranges from 1 % to 10 %, with the highest levels again found in Spain (8.9 %) and the United Kingdom (10.5 %). Last year use ranges between 0.2 % and 4.8 %, with the figures for Denmark, Ireland, Italy and the Netherlands being around 2 %, and for Spain and the United Kingdom over 4 % (Figure 6). Data from school surveys show very low lifetime prevalence for the use of cocaine, ranging from 0 % in Cyprus, Finland and Sweden to 6 % in Spain, with even lower lifetime prevalence rates for use of crack cocaine, ranging from 0 % to 3 % (Hibell et al., 2004).

<sup>(141)</sup> See Table PPP-7 in the 2006 statistical bulletin.

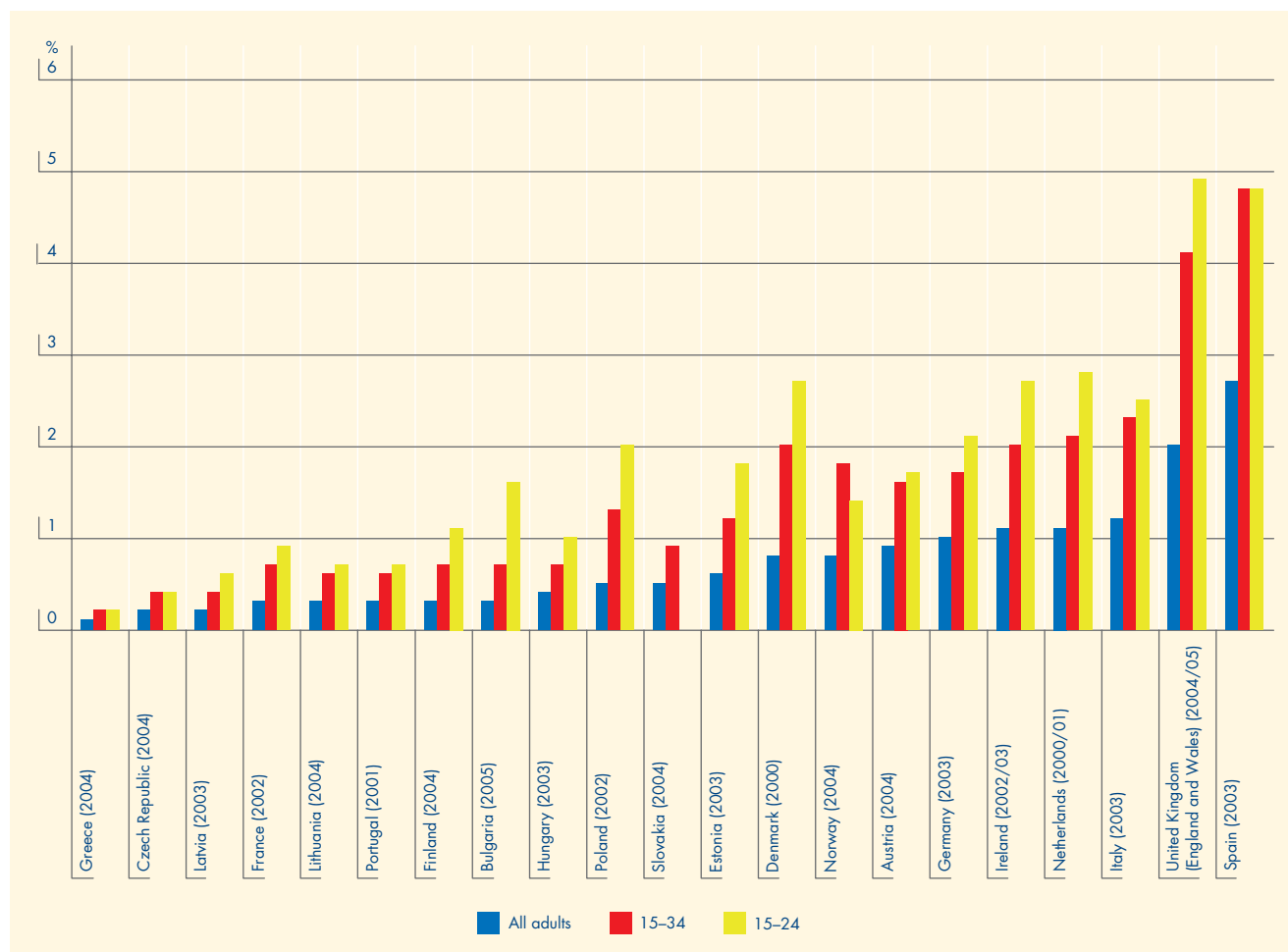
<sup>(142)</sup> Over the period 1999–2004, data on cocaine purity were available for at least three consecutive years in Belgium, the Czech Republic, Denmark, Germany, Estonia, Spain, France, Ireland, Italy, Latvia, Lithuania, Luxembourg, Hungary, the Netherlands, Austria, Portugal, Slovakia, the United Kingdom and Norway.

<sup>(143)</sup> Precursor used in the manufacture of cocaine and scheduled under Table I of the 1988 convention.

<sup>(144)</sup> These data do not include quantities involved in stopped shipments.

<sup>(145)</sup> Based on a weighted average of national figures; more details in footnote (53).

<sup>(146)</sup> For detailed figures for each country, see the table in 'General population surveys of drug use' in the 2006 statistical bulletin.

**Figure 6:** Last year prevalence of cocaine use among all adults (aged 15–64) and young adults (aged 15–34 and 15–24)

NB: Data are from the most recent national surveys available in each country at the time of reporting. See Tables GPS-8, GPS-11 and GPS-18 in the 2006 statistical bulletin for further information.

Sources: Reitox national reports (2005), taken from population surveys, reports or scientific articles.

Cocaine consumption is higher among young males. For instance, among males aged 15–34 years, surveys from Denmark, Germany, Spain, Italy, the Netherlands, the United Kingdom and Norway found that lifetime experience was between 5 % and 14 %. Last year use was lower, but four countries reported figures higher than 3 %, with Spain and the United Kingdom reporting figures of about 6–7 %<sup>(147)</sup>, suggesting that in these countries about 1 in 15 young males has used cocaine recently. This proportion will be substantially higher in urban areas.

Among the general population, cocaine use seems to be occasional, occurring mainly at weekends and in recreational settings (bars and discos), where it can reach high levels. Research studies conducted among young people in dance and music settings in different countries

reveals prevalence estimates for cocaine use that are much higher than those found in general populations, with lifetime prevalence ranging from 10 % to 75 % (see the selected issue on drug use in recreational settings). For instance, the British Crime Survey 2004/05 reported a prevalence estimate for the use of 'class A' drugs among people going to discos or nightclubs that was at least two times higher than the rate among those who did not go to these venues (Chivite-Matthews et al., 2005) (see also the selected issue on drug use in recreational settings). On average, about one third of all European adults who have ever used cocaine have used it in the previous 12 months; for comparison, only 13 % report having used it in the previous 30 days. For instance, 2–4 % of males aged 15–24 years in Spain, Italy, the United Kingdom and Bulgaria<sup>(148)</sup> report having used cocaine in

<sup>(147)</sup> See Figure GPS-9 in the 2006 statistical bulletin.

<sup>(148)</sup> 2001 survey. In the 2003 survey, gender breakdown was not reported by 10-year age groups.

the previous 30 days. A rough estimate of current cocaine use in Europe would be about 1.5 million adults aged 15–64 years (80 % in the age range 15–34 years). This can be considered as a minimum estimate, given probable under-reporting.

Patterns of cocaine use are very different in different groups of users. In a European multi-city study, it was found that socially integrated cocaine users mainly snorted (95 %) the substance, while only a small fraction had smoked or injected it, but combined use of cannabis and alcohol was very common (Prinzleve et al., 2004). Among users in addiction treatment settings or in socially marginalised groups, injection was frequent, and crack use was usual in Hamburg, London and Paris, and to a lesser extent in Barcelona and Dublin. Crack use among the European general population seems to be low. For instance, lifetime prevalence of crack use was reported to be 0.5 % in Spain (2003) and 0.8 % in the United Kingdom (Chivite-Matthews et al., 2005). In three countries, lifetime prevalence of crack use was surveyed in club settings and found to be even lower than heroin use (the Czech Republic 2 %, the United Kingdom 13 % and France 21 %). However, use of crack among marginalised groups or opioid users is a cause for concern in some cities. For example, among a targeted group of 94 female street sex workers in Amsterdam, the prevalence estimate for lifetime use of crack cocaine was extremely high at 91 % (Korf, 2005, cited in the Dutch national report).

For comparison, according to the 2004 United States national survey on drug use and health, 14.2 % of adults (defined as 12 years or older) reported lifetime experience with cocaine, which contrasts with a European average of 3 %. Last year use was 2.4 %, compared with a European average of 1 %, although in some EU countries, e.g. Spain (2.7 %) and the United Kingdom (2 %), reported figures are in the same range as in the United States <sup>(149)</sup>. The comparatively higher lifetime figures in the United States may be in part related to earlier spread of cocaine use in that country.

Among young adults (aged 16–34), US figures were 14.6 % (lifetime), 5.1 % (last year) and 1.7 % (last month), whereas the EU average figures for 15- to 34-year-olds were, respectively, about 5 % (lifetime), 2 % (last year) and 1 % (last month).

### Trends in cocaine use

For several years, there have been warnings about the possibility of increasing cocaine use in Europe, based on

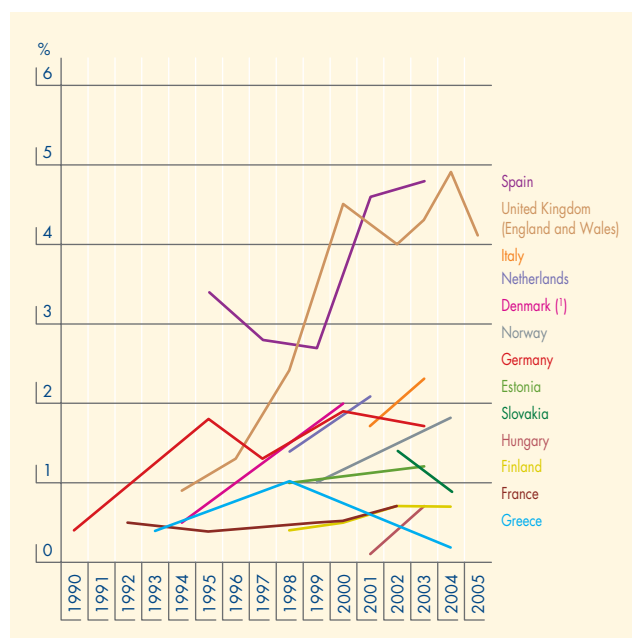
data from diverse sources (e.g. market indicators, treatment demands, deaths). Although the available information on cocaine trends among the population is improving as more countries carry out repeated surveys, the data are still limited. In the case of cocaine, added difficulties are the lower prevalence levels and the probable under-reporting of use.

Recent cocaine use (last year) increased markedly in the second half of the 1990s among young adults in the United Kingdom, until 2000, and in Spain, until 2001, with an apparent stabilisation in recent years. In Germany, a moderate increase was observed over the 1990s, but the figures have remained stable in recent years, at levels clearly lower than in Spain and the United Kingdom (Figure 7).

Moderate increases in last year use have been observed in Denmark (up to 2000), Italy, Hungary, the Netherlands (up to 2001) and Norway. This trend needs to be interpreted carefully as it is based on only two surveys in each country.

In the case of cocaine and other substances (e.g. ecstasy, amphetamines, hallucinogenic mushrooms), trends could be

**Figure 7:** Trends in last year prevalence of cocaine use among young adults (aged 15–34)



(1) In Denmark, the value for 1994 corresponds to 'hard drugs'.

NB: Data are taken from the most recent national surveys available in each country at the time of reporting. See Table GPS-4 in the 2006 statistical bulletin for further information.

Sources: Reitox national reports (2005), taken from population surveys, reports or scientific articles.

<sup>(149)</sup> Source: SAMHSA, Office of Applied Studies, 2004 national survey on drug use and health (<http://oas.samhsa.gov/nsduh.htm#nsduhinfo>). Note that the age range for 'all adults' in the US survey (12 years and over) is wider than the age standard range for European surveys (15–64). The figures for the 16–34 years group in the United States have been recomputed by the EMCDDA.



better identified by focusing the analysis on groups in which drug use is concentrated, in particular young people living in urban areas. These populations are explored in more depth in the selected issue on drug use in recreational settings. In addition, survey information should be complemented by focused studies among young people in selected groups (nightlife settings).

## Treatment demand data <sup>(150)</sup>

After opioids and cannabis, cocaine is the drug most commonly reported as the reason for entering treatment and accounts for about 8 % of all treatment demands across the EU in 2004 <sup>(151)</sup>. It should be noted that Spain, a country usually reporting high treatment demands for cocaine, has not yet provided data. This overall figure reflects a wide variation between countries: in most countries treatment demands related to cocaine use are quite low, but in the Netherlands (37 %) and, historically, Spain (26 % in 2002) the proportion of all clients who ask for treatment for cocaine use is far higher. In the most recent data available, a group of countries report percentages of cocaine clients among all treatment clients between 5 % and 10 % (Denmark, Germany, France, Ireland, Italy, Cyprus, Malta, the United Kingdom and Turkey), whereas in the remaining countries the proportions are very low <sup>(152)</sup>. In several countries, compared to all clients, there are higher percentages of new clients demanding treatment for primary cocaine use <sup>(153)</sup> and overall around 12 % of all new treatment demands are reported as cocaine related. Cocaine is also reported as a secondary drug by around 12 % of new clients <sup>(154)</sup>.

The increasing trends among clients seeking treatment for cocaine use reported in previous years is continuing; from 1999 to 2004, an analysis that interpolates for unreported data suggests that the proportion of new clients demanding treatment for cocaine use grew from around 10 % to 20 % during this period (based on 17 EU countries and Bulgaria and Romania) <sup>(155)</sup>.

Overall, most cocaine treatment demands in Europe are not related to crack cocaine: around 80 % of new outpatient cocaine clients are reported to be using cocaine hydrochloride (cocaine powder), with less than 20 % using

crack cocaine. However, crack cocaine users may pose particular challenges for treatment services as they tend to have a more marginalised social profile than users of cocaine powder. A European study on cocaine use (powder and crack cocaine) found an association between crack use and social and mental health problems; however, the study also reported that crack cocaine use itself is not sufficient to explain the social or mental health problems (Haasen et al., 2005). A recent study of 585 cocaine and crack clients in Scotland found that the crack users are more likely to have a longer history of problematic drug use and more involvement in criminal activities (Neale and Robertson, 2004, cited in the United Kingdom national report).

Looking at the profile of cocaine clients in outpatient settings, it appears that new clients using cocaine as their primary drug are usually older than other drug consumers: 70 % are in the 20–34 years age group with a smaller group (13 %) aged between 35 and 39 years <sup>(156)</sup>.

Cocaine is often used in combination with another illicit or licit subsidiary drug, often cannabis (31.6 %), opioids (28.6 %) or alcohol (17.4 %) <sup>(157)</sup>. Local studies of drug injectors suggest that, in some areas, the combination of heroin and cocaine within an injection may be becoming more popular (sometimes referred to by drug injectors as 'speedballing'). The combination of opioids and cocaine is currently more apparent in the treatment data. Among clients reporting primary use of opioids, 31 % in Italy, 42 % in the Netherlands and 44 % in the United Kingdom report a secondary cocaine use. Among primary cocaine users, 28 % in Italy and 38 % in the United Kingdom report secondary use of opioids.

## Treatment of cocaine dependence

There is not enough evidence to support pharmacological treatment for cocaine or other psychostimulant dependence. However, in their comprehensive review of the use of pharmacotherapies for psychostimulant users, Shearer and Gowing (2004) conclude that substitution therapy, which is successful in the case of opioid and nicotine dependence and has the potential for attracting and retaining users in treatment, has not yet been adequately tested in stimulant

<sup>(150)</sup> See footnote (70).

<sup>(151)</sup> See Figure TDI-2 in the 2006 statistical bulletin.

<sup>(152)</sup> See Table TDI-5 in the 2006 statistical bulletin; for Spain data refer to the 2002 reporting year.

<sup>(153)</sup> See Table TDI-4 in the 2006 statistical bulletin.

<sup>(154)</sup> See Table TDI-23 in the 2006 statistical bulletin.

<sup>(155)</sup> See Figure TDI-1 in the 2006 statistical bulletin.

<sup>(156)</sup> See Table TDI-10 in the 2006 statistical bulletin.

<sup>(157)</sup> See Table TDI-24 in the 2006 statistical bulletin.



users. A review of the literature on the responses to and effectiveness of cocaine treatment, including responses to mental health disorders among crack cocaine users, has been published recently by the EMCDDA <sup>(158)</sup>.

In some countries, including the United States and the United Kingdom, there is currently substantial investment in building up immunotherapy treatment options by developing antibodies that can intercept cocaine in the bloodstream before it reaches the central nervous system (see box on immunotherapy for cocaine addicts).

### Immunotherapy for cocaine addicts

In contrast to heroin addiction, which can be treated with agonists such as methadone or antagonists such as naltrexone, there are currently no medical treatments available for cocaine addiction. The reason for this would appear to be the mechanism of action through which cocaine exerts its effects on the brain neurotransmitters dopamine and serotonin. Whereas heroin binds to brain opioid receptors, such as the mu receptors, and therefore mimics the action of the brain's own endorphins, cocaine inhibits the reabsorption of dopamine (and indeed serotonin) from the neuronal synapse once it has had its effect, leading to a build-up of the transmitter, thus prolonging and strengthening its effect.

This does not necessarily mean that it is not possible to develop a medical treatment for cocaine addiction, only that it may be more difficult to do so and may involve different concepts from those used in the development of treatments for heroin dependence.

One exciting strand of research is the use of immunotherapy, i.e. the development of a vaccine that would effectively 'neutralise' the action of cocaine by preventing the drug from reaching the brain. The basic concept has undergone limited testing. A vaccine developed in the United Kingdom was tested in a small number of cocaine addicts, 18 in total, over a period of 14 weeks. It was found that three quarters of the vaccinated cohort of cocaine addicts were able to remain drug free for a period of three months with no untoward side-effects. In addition, after six months, both those who relapsed and those who did not stated that the feelings of euphoria were not as potent as prior to vaccination. As a result of these findings, the vaccine, known as drug-protein conjugate TA-CD, is undergoing phase 2 clinical trials. An alternative immunotherapeutic approach involves the development of monoclonal antibodies to cocaine, but this has only been tested preclinically.

The potential benefit of the cocaine vaccine TA-CD has raised ethical concerns about the use of a vaccine: who would receive it, who would make the decision and on what criteria, etc.

Combining several specific psychosocial treatment interventions is currently considered the most promising treatment option for cocaine and other psychostimulant users. The combination of the community reinforcement approach (CRA) with contingency management has been shown to reduce cocaine use in the short term (Higgins et al., 2003; Roozen et al., 2004).

CRA is an intensive treatment method that involves family, friends and other members of the client's social network throughout the treatment and consists in training the clients to make social contacts, to improve their self-image, and to find work and rewarding leisure activities in order to establish a different lifestyle (Roozen et al., 2004). In combination with contingency management — a method that aims to influence clients' behaviour by offering meaningful incentives, e.g. presents, vouchers or privileges for cocaine-free urine samples — positive effects on drug use and psychosocial functioning have been achieved during the treatment phase and post-treatment follow-up in cocaine-dependent outpatients, although effects on cocaine use appeared to be limited to the treatment period (Higgins et al., 2003).

New approaches to the highly problematic groups of cocaine- and crack-using heroin users focus on harm reduction as primary treatment goal and apply behavioural therapies, in particular contingency management approaches, in combination with methadone maintenance programmes or heroin-assisted treatment (Schottenfeld et al., 2005; van den Brink, 2005; Poling et al., 2006).

### Harm reduction approaches

In Europe, the development of harm reduction approaches that target cocaine use has been limited. This might now be beginning to change as increased awareness of both the extent of cocaine use and the problems associated with it stimulates interest in developing responses to address the needs of cocaine users. The value of prevention and harm reduction approaches to reducing the risks associated with cocaine use remains largely unexplored, but a number of areas may have potential for the development of this kind of approach. For example, it is possible that cocaine users may benefit from interventions that address issues such as the increased toxicity of cocaine and alcohol combinations, the potential association of cocaine use with cardiovascular problems or behavioural links that may put the users at increased risk of HIV infection or becoming the victim of an accident or violent crime. As cocaine use can escalate quickly, brief interventions that can alert users to the fact that they may be beginning to experience negative consequences due to their use of the drug may also be worth exploring.

<sup>(158)</sup> [www.emcdda.europa.eu/?nnodeid=400](http://www.emcdda.europa.eu/?nnodeid=400)

As a result of the serious health and social problems associated with crack cocaine use, there is more experience of developing services for this group, although activities are limited to those relatively few cities in Europe that have experienced a significant crack cocaine problem. In a number of cities crack cocaine users have been targeted by outreach schemes that attempt to engage with what is often viewed as a difficult group to work with. Although overall the evidence base remains relatively weak, some studies have suggested that benefits can accrue. For example, one study of an innovative outreach treatment programme in Rotterdam (Henskens, 2004, cited in the Dutch national report) identified factors that were observed to be important for treating this group of clients, who are often difficult to engage in conventional drug services.

Compulsive patterns of crack and cocaine use may be associated with an increase in sexual health risk-taking,

and some low-threshold programmes specifically target crack-using sex workers to transmit safer sex and drug use messages and to distribute condoms and lubricants (see selected issue on gender).

A more controversial approach has been adopted in some cities in Europe, where the concept of safe consumption rooms, usually targeting drug injection, has been extended to drug inhalation. Rooms for supervised inhalation have been opened in several Dutch, German and Swiss cities (EMCDDA, 2004c). Although the supervision of consumption hygiene is a main objective of such services, there is some evidence that they could also act as a conduit to other care options; for example, monitoring of one service in Frankfurt, Germany, reported that, during a six-month evaluation period in 2004, more than 1 400 consumptions were supervised, while 332 contact talks, 40 counselling sessions and 99 referrals to other drugs services were documented.



## Chapter 6

# Opiod use and drug injection

### Heroin supply and availability <sup>(159)</sup>

In Europe, two forms of imported heroin are found: the commonly available brown heroin (its chemical base form) and the less common and usually more expensive white heroin (a salt form), which typically originates from South-East Asia. In addition, some opioid drugs are produced within the EU, but manufacture is mainly confined to small-scale production of home-made poppy products (e.g. poppy straw, poppy concentrate from crushed poppy stalks or heads) in a number of eastern EU countries, for example Lithuania, where the market for poppy stalks and concentrate seems to have stabilised, and Poland, where production of 'Polish heroin' might be decreasing (CND, 2006).

### Production and trafficking

Heroin consumed in Europe is predominantly manufactured in Afghanistan, which remains the world leader in illicit opium supply and in 2005 accounted for 89 % of global illicit opium production, followed by Myanmar (7 %). Global production of illicit opium remained relatively stable between 1999 and 2004, except in 2001, when a ban on opium poppy cultivation enforced by the Taliban regime in Afghanistan resulted in a dramatic but short-lived decline; it is estimated that about 4 670 tonnes was produced in 2005, a 4 % decline compared with 2004 (CND, 2006). Global potential production of heroin was estimated at 472 tonnes in 2005 (495 in 2004) (UNODC, 2006).

Heroin enters Europe by two major trafficking routes. The historically important Balkan route continues to play a crucial role in heroin smuggling. Following transit through Pakistan, Iran and Turkey, the route then diverges into a southern branch through Greece, the former Yugoslav Republic of Macedonia (FYROM), Albania, Italy, Serbia, Montenegro and Bosnia-Herzegovina and a northern branch through Bulgaria, Romania, Hungary, Austria, Germany and the Netherlands, the latter operating as a secondary distribution

centre to other western European countries. Heroin seizures in 2004 suggest that the southern branch has now gained the same importance as the northern branch in terms of volume smuggled (WCO, 2005; INCB, 2006a). Since the mid-1990s, heroin has been increasingly (but to a lesser extent than through the Balkan routes) smuggled to Europe through the 'silk route' via central Asia (in particular Turkmenistan, Tajikistan, Kyrgyzstan and Uzbekistan), the Caspian Sea and the Russian Federation, Belarus or Ukraine, to Estonia, Latvia, some of the Nordic countries and Germany (Reitox national reports, 2005; CND, 2006; INCB, 2006a). Although these routes are the most important, countries in the Arabian peninsula (Oman, United Arab Emirates) have become transit sites for heroin consignments from South and South-West Asia destined for Europe (INCB, 2006a). In addition, heroin destined for Europe (and North America) was seized in 2004 in East and West Africa, the Caribbean, and Central and South America (CND, 2006).

### Seizures

In 2004, 210 tonnes of opium (or 21 tonnes of heroin equivalent), 39.3 tonnes of morphine and 59.2 tonnes of heroin were seized worldwide. Asia (50 %) and Europe (40 %) continued to account for the greatest quantities of heroin seized worldwide. Europe's share is increasing, largely as a result of increased seizures in south-eastern European countries (Turkey), which for the first time surpassed the volume intercepted in western and central Europe (CND, 2006).

In 2004, an estimated 46 000 seizures resulted in the recovery of about 19 tonnes of heroin in the reporting countries. The United Kingdom continued to account for the highest number of seizures, followed by Germany and Italy, while Turkey seized the largest quantities (followed by Italy and the United Kingdom), accounting for nearly half of the total amount intercepted in 2004 <sup>(160)</sup>. Over the period

<sup>(159)</sup> See 'Interpreting seizures and other market data', p. 37.

<sup>(160)</sup> This should be checked against missing 2004 data when available. Data on both number of heroin seizures and quantities of heroin seized in 2004 were not available for Ireland and the United Kingdom; data on number of heroin seizures were not available for the Netherlands in 2004. For estimating purposes, 2004 missing data were replaced by 2003 data. Data on quantities seized in 2004 provided by the Netherlands were only estimates, which could not be included in the analysis of trends to 2004.

1999–2004, seizures of heroin fluctuated, and based on data from reporting countries it seems that the decrease observed in 2002–03 was followed by an increase in 2004 <sup>(161)</sup>. Over the five-year period 1999–2004, total quantities seized steadily increased, reaching a record level in 2004, largely because the quantity of heroin seized in Turkey nearly doubled in 2004 compared with the previous year <sup>(162)</sup>.

### Price and purity

In 2004, the average retail price of brown heroin varied widely across Europe, from EUR 12 per gram in Turkey to EUR 141 per gram in Sweden, while that of white heroin varied between EUR 31 per gram in Belgium and EUR 202 per gram in Sweden, and the price of heroin of type undistinguished ranged from EUR 35 per gram in Slovenia to EUR 82 per gram in the United Kingdom <sup>(163)</sup>. Data available for 1999–2004 show a decrease in the average price of heroin, corrected for inflation <sup>(164)</sup>, in most reporting countries <sup>(165)</sup>.

The average purity of brown heroin at user level varied in 2004 from 10 % in Bulgaria to 48 % in Turkey, while that of white heroin varied between 20 % in Germany and 63 % in Denmark, and that of heroin of type undistinguished ranged from 16 % in Hungary to 42–50 % <sup>(166)</sup> in the Netherlands <sup>(167)</sup>. The average purity of heroin products has been fluctuating in most reporting countries <sup>(168)</sup> since 1999, making it difficult to identify any overall trend.

### International action against the manufacture and trafficking of heroin

Acetic anhydride <sup>(169)</sup> is an important precursor used in the illicit manufacture of heroin. Operation Topaz is an international initiative to monitor licit trade in acetic anhydride and to investigate methods and routes of diversion (INCB, 2006b). There is considerable licit trade in acetic anhydride, making it difficult to control. This is illustrated by the fact that,

since 2001, 22 exporting countries/territories have provided 7 684 pre-export notifications to the INCB involving over 1 350 000 tonnes of acetic anhydride. Seizures in Turkey (1 600 litres in 2004) have significantly declined in recent years, perhaps indicating that traffickers have developed new routes and methods of diversion. In 2004, for the first time, seizures in Europe (Bulgaria) were identified as having come from south-western Asia (INCB, 2006b).

Although aspects of Operation Topaz related to monitoring international trade have proved to be successful, little progress has been made in identifying and dismantling routes used for smuggling acetic anhydride within Afghanistan and in its neighbouring countries (INCB, 2006b).

Project Mustard, run by Europol, aims at identifying and targeting Turkish and associated criminal groups operating towards and within the EU and engaged in the trafficking of drugs, primarily heroin. It provides operational support to live investigations in participating states and enhances the strategic intelligence picture by providing insight into the activities of Turkish organised crime and associated groups (Europol, 2006).

### Prevalence estimates of problem opioid use

Data in this section are derived from the EMCDDA problem drug use (PDU) indicator, which covers 'injecting drug use or long duration/regular use of heroin, cocaine and/or amphetamines'. Historically, problem drug use estimates have principally reflected heroin use, although in a few countries, as discussed elsewhere in the report, amphetamine users are an important component.

When interpreting the estimates of problem opioid use it should be kept in mind that patterns of use are becoming more diverse. For example, polydrug use problems have become progressively more important in most countries, whereas some countries where opioid problems have

<sup>(161)</sup> See Table SZR-7 in the 2006 statistical bulletin.

<sup>(162)</sup> See Table SZR-8 in the 2006 statistical bulletin.

<sup>(163)</sup> See Table PPP-2 in the 2006 statistical bulletin.

<sup>(164)</sup> Taking 1999 as the base year for the value of money in all countries.

<sup>(165)</sup> In the period 1999–2004, data on heroin prices were available for at least three consecutive years: for brown heroin in Belgium, the Czech Republic, Spain, France, Ireland, Luxembourg, Poland, Portugal, Slovenia, Sweden, the United Kingdom, Bulgaria, Romania, Turkey and Norway; for white heroin in the Czech Republic, Germany, France, Latvia and Sweden; and for heroin of type undistinguished in Lithuania and the United Kingdom.

<sup>(166)</sup> These two figures correspond to data from two different monitoring systems (see Table PPP-6 (part iii) in the 2006 statistical bulletin); caution is required as the figure 50 % is based on one sample only.

<sup>(167)</sup> See Table PPP-6 in the 2006 statistical bulletin.

<sup>(168)</sup> In the period 1999–2004, data on heroin purity were available for at least three consecutive years: for brown heroin in the Czech Republic, Denmark, Spain, Ireland, Italy, Luxembourg, Austria, Portugal, Slovakia, the United Kingdom, Turkey and Norway; for white heroin in Denmark, Germany, Estonia, Finland and Norway; and for heroin of type undistinguished in Belgium, Lithuania, Hungary and the Netherlands.

<sup>(169)</sup> Scheduled under Table I of the 1988 convention.

historically predominated now report changes towards other drugs. Most heroin users are now believed to use stimulants and other drugs besides opioids, but reliable data on polydrug use are very hard to obtain at the EU level (see Chapter 8).

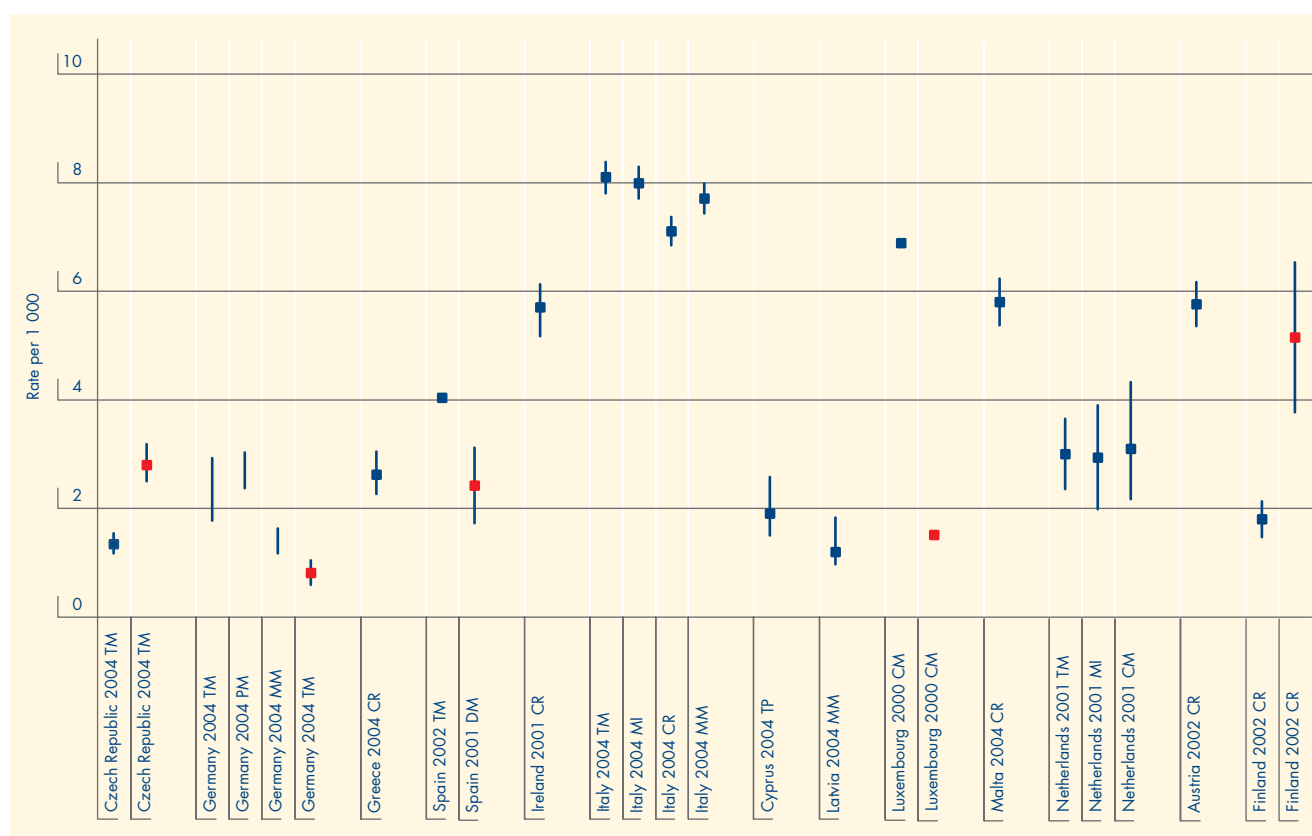
Despite the general trend towards diversification of the phenomenon, in many countries estimates of problem drug use are exclusively based on problem use of heroin or other opioids as the primary substance. This can be seen in the estimated rates of problem opioid use (see Figure 8), which for the most part are very similar to those of PDU<sup>(170)</sup>. It is not clear whether in the other countries the prevalence of non-opioid problem use is almost negligible or, possibly, significant but too difficult to estimate.

Estimating the number of problem opioid users is difficult, and analyses of a sophisticated nature are required to obtain prevalence figures from the available data sources.

Moreover, estimates are often localised geographically, and extrapolation to form national estimates are not necessarily reliable.

Estimates of the prevalence of problem opioid use at national level over the period 2000–04 range between one and eight cases per 1 000 population aged 15–64 (based on midpoints of estimates). Estimated prevalence rates of problem opioid use differ greatly between countries, although when different methods have been used within one country the results are largely consistent. Higher estimates of problem opioid use are reported by Ireland, Italy, Luxembourg, Malta and Austria (5–8 cases per 1 000 inhabitants aged 15–64 years), and lower rates are reported by the Czech Republic, Germany, Greece, Cyprus, Latvia and the Netherlands (fewer than four cases per 1 000 inhabitants aged 15–64 years) (Figure 8). Some of the lowest well-documented estimates now available

**Figure 8:** Estimates of the prevalence of problem opioid and stimulant use, 2000–04 (rate per 1 000 population aged 15–64)



NB: ■ indicates stimulant use, other estimates are opioid use.

MM, mortality multiplier; CR, capture-recapture; TM, treatment multiplier; PM, police multiplier; MI, multivariate indicator; TP, truncated Poisson; CM, combined methods. For more information see Tables PDU-1, PDU-2 and PDU-3 in the 2006 statistical bulletin. The symbol indicates a point estimate, a bar indicates an uncertainty interval, which can be either a 95 % confidence interval or an interval based on sensitivity analysis. Target groups may vary slightly owing to different methods and data sources, therefore comparisons should be made with caution.

Sources: National focal points.

<sup>(170)</sup> See Figure PDU-1 (part i) in the 2006 statistical bulletin.

are from the new countries of the EU, but in Malta a higher prevalence has been reported (5.4–6.2 cases per 1 000 aged 15–64). One can derive from the limited data a general EU prevalence of problem opioid use of between two and eight cases per 1 000 of the population aged 15–64. However, these estimates are still far from robust and will need to be refined as more data become available.

Local and regional estimates specifically of problem opioid use are not available; however, the available data regarding problem drug use (including use of stimulants and other drugs) suggest that there is a large variation in prevalence among cities and regions. The highest local prevalence estimates in the period 2000–04 are reported from Ireland, Portugal, Slovakia and the United Kingdom, reaching rates of between 15 and 25 per 1 000 <sup>(171)</sup>. Geographic variability is, as might be expected, also marked at the local level; for example, the prevalence in different parts of London varies between 6 and 25 cases per 1 000. The wide variation in local prevalence rates makes generalisation difficult.

### Drug users in prisons

Information on drug use among prisoners is patchy. Many of the data available in Europe come from ad hoc studies, sometimes carried out at local level in establishments not representative of the national prison system, and using samples of prisoners that vary considerably in size. As a result, differences in terms of the characteristics of the populations studied limit comparisons of data between surveys — within and between countries — as well as extrapolation of results and trend analysis.

Data on drug use among the prison population in the last five years (1999–2004) were provided by most European countries <sup>(1)</sup>. They show that, compared with the general population, drug users are overrepresented in prison. The proportion of detainees who report ever having used an illicit drug varies among prisons and detention centres, but average rates range from one third or less in Hungary and Bulgaria to two thirds or more in the Netherlands, the United Kingdom and Norway, with most countries reporting lifetime prevalence rates of around 50 % (Belgium, Greece, Latvia, Portugal, Finland). Cannabis remains the most frequently used illicit drug, with lifetime prevalence rates among prisoners ranging between 4 % and 86 %, compared with lifetime prevalence rates of 3–57 % for cocaine, 2–59 % for amphetamines and 4–60 % for heroin <sup>(2)</sup>.

Regular drug use or dependence prior to imprisonment is reported by 8–73 % of inmates, while the lifetime prevalence of drug injection among the prison population is 7–38 % <sup>(3)</sup>.

### Time trends in problem opioid use

A lack of reliable and consistent historical data complicates the assessment of trends over time in problem opioid use. The evidence that has been collected suggests that the prevalence of problematic opioid use differs widely between countries, and that trends are not consistent across the EU. Reports from some countries, supported by other indicator data, suggest that problem opioid use continued to increase during the latter half of the 1990s (Figure 9) but appears to have stabilised or declined somewhat in more recent years. Repeated estimates on problem opioid use for the period between 2000 and 2004 are available from seven countries (the Czech Republic, Germany, Greece, Spain, Ireland, Italy, Austria): four countries (the Czech Republic, Germany, Greece, Spain) have recorded a decrease in problem opioid use, while one reported an increase (Austria — although this is difficult to interpret as the data collection system changed during this period). Evidence from people entering treatment for the first time suggests that the incidence of problem opioid use may in general be slowly declining; therefore in the near future a decline in prevalence is to be expected.

Although the majority of drug users reduce or stop their drug use after incarceration, some detainees continue and others start using drugs (and/or injecting drugs) while in prison. According to available studies, 8–51 % of inmates have used drugs within prison, 10–42 % report regular drug use and 1–15 % have injected drugs while in prison <sup>(4)</sup>. This raises issues around the potential spread of infectious diseases, in particular in relation to access to sterile injection equipment and sharing practices among the prison population.

Repeated surveys carried out in the Czech Republic (1996–2002), Denmark (1995–2002), Lithuania (2003/04), Hungary (1997–2004), Slovenia (2003/04) and Sweden (1997–2004) show an increase in the prevalence of various types of drug use among detainees, whereas France (1997–2003) reports a significant decrease in the proportion of injectors among the prison population <sup>(5)</sup>.

<sup>(1)</sup> Countries reporting studies carried out in the last five years (1999–2004) and providing data on drug use patterns in prison populations were Belgium, the Czech Republic, Denmark, Germany, Greece, France, Ireland, Italy, Latvia, Lithuania, Hungary, Malta, the Netherlands, Austria, Portugal, Slovenia, Slovakia, Finland, Sweden, the United Kingdom, Bulgaria and Norway.

<sup>(2)</sup> See Table DUP-1 and Figure DUP-1 in the 2006 statistical bulletin.

<sup>(3)</sup> See Tables DUP-2 and DUP-5 in the 2006 statistical bulletin.

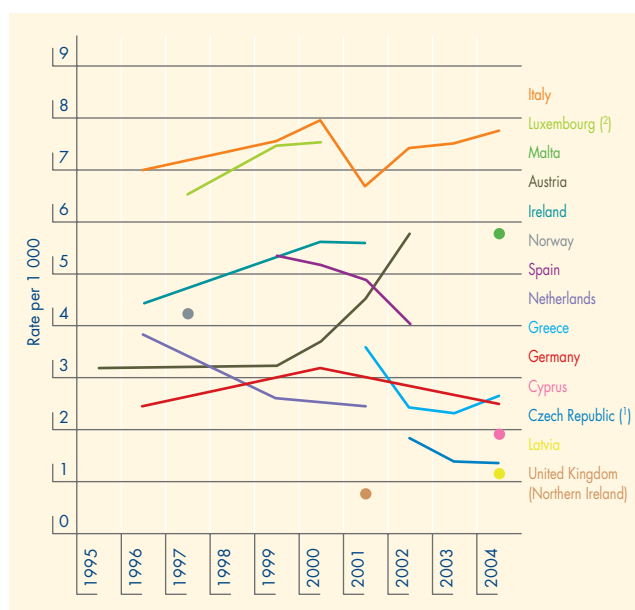
<sup>(4)</sup> See Tables DUP-3 and DUP-4 in the 2006 statistical bulletin.

<sup>(5)</sup> See Table DUP-5 in the 2006 statistical bulletin.

<sup>(171)</sup> See Figure PDU-6 (part i) in the 2006 statistical bulletin.



**Figure 9:** Trends in the prevalence of problem opioid use, 1995–2004 (rate per 1 000 population aged 15–64)



(1) Estimates for the 18–64 age group.

(2) Computed from data for the 15–54 age group.

NB: Time series are combined where methods are similar over the time span. For more information see Tables PDU-1, PDU-2 and PDU-3 in the 2006 statistical bulletin.

Sources: National focal points.

## Injecting drug use

Injecting drug users (IDUs) are at very high risk of experiencing adverse consequences such as serious infectious diseases or overdoses. It is therefore important to consider drug injection separately.

Despite their importance for public health, few countries provide estimates of injecting drug use at national or subnational level <sup>(172)</sup>. In this section, IDU estimates are not categorised by primary drug, given the scarcity of data, although the trends in the proportion of IDUs among treated heroin users (see below) are of course specific for heroin injecting.

Most available estimates of injecting drug use are derived from either fatal overdose rates or data on infectious diseases (such as HIV). Available estimates vary considerably between countries: since 2000, estimates at national level have mostly ranged between one and six cases per 1 000 population aged 15–64, with some higher estimates existing prior to 2000. Since 2000, the highest national prevalence rates of injecting drug use, among the countries where estimates are

available, have been reported by Luxembourg and Austria, with a rate of about six cases per 1 000 population aged 15–64. The lowest estimates are from Cyprus and Greece, at just over one case per 1 000.

Where time trends are available they do not show a general pattern, suggesting declines in some countries and regions (for example in Scotland, United Kingdom) and increases in others. However, the lack of data in this area means that it is not possible to draw a clear picture.

Monitoring the proportion of current injectors among heroin users entering treatment forms an important complement to monitoring the prevalence of injecting drug use in the general population. However, it is important to remember that the observed proportions do not necessarily reflect trends in the prevalence of all injecting drug use. For example, in countries with a high proportion of stimulant users (the Czech Republic, Slovakia, Finland, Sweden), the rates of injecting among heroin users might not be representative of the overall situation.

The proportion of IDUs among primary heroin users entering drug treatment again suggests marked differences in levels of injecting drug use between countries as well as varying trends over time <sup>(173)</sup>. In some countries (Spain, the Netherlands and Portugal), a relatively small proportion of treated heroin users inject, whereas in other countries injection appears to be still the main form of heroin use. In some EU-15 Member States from which data are available (Denmark, Greece, Spain, France, Italy and the United Kingdom), rates of injecting among heroin users in treatment have declined. However, in most of the new Member States, at least where data exist, a large proportion of heroin users entering treatment are injectors.

## Treatment demand data <sup>(174)</sup>

In many countries, opioids (largely heroin) remain the principal drug for which clients seek treatment. Of the total treatment requests reported for 2004 under the treatment demand indicator, opioids were recorded as the principal drug in about 60 % of cases — and just over half (53 %) of these clients reported injecting the drug <sup>(175)</sup>. It should be noted that the treatment demand indicator does not cover all people in opioid treatment, which is a considerably greater number, only clients requesting treatment during the reported year.

<sup>(172)</sup> See Figure PDU-7 in the 2006 statistical bulletin.

<sup>(173)</sup> See Figure PDU-3 (part i) in the 2006 statistical bulletin.

<sup>(174)</sup> See footnote (70).

<sup>(175)</sup> See Figure TDI-2 and Table TDI-5 in the 2006 statistical bulletin.



The proportion of clients seeking treatment for heroin use varies between countries. Based on the most recent data available, countries can be classified into three groups according to the proportion of drug users seeking treatment who report problem use of heroin, as follows:

- below 50 % — the Czech Republic, Denmark, Hungary, the Netherlands, Poland, Slovakia, Finland, Sweden;
- 50–70 % — Germany, Spain, France, Ireland, Cyprus, Latvia, Portugal, United Kingdom, Romania;
- over 70 % — Greece, Italy, Lithuania, Luxembourg, Malta, Slovenia, Bulgaria <sup>(176)</sup>.

Countries where a sizeable proportion of opioid clients are using substances other than heroin include Hungary, where the use of home-made opium poppy products is widespread, and Finland, where most opioid clients are misusing buprenorphine <sup>(177)</sup>.

Most opioid users, like users of other drugs, seek treatment in an outpatient setting; however, in comparison with cocaine and cannabis clients, a higher proportion of opioid clients are treated in inpatient centres.

Most countries with significant numbers of new heroin clients each year (except Germany, where the reporting base has been extended) report that there has been a decrease in the last 4–5 years, although not among clients who have previously been in treatment. The number of repeat requests has generally not declined, and in most countries the total number of treatment demands for heroin has remained roughly stable. Notable exceptions are Germany and the United Kingdom, where total reported requests have increased. Overall, however, the percentage of treatment demands accounted for by heroin (all and new requests) has fallen; in the case of new demands it has declined from about two thirds to around 40 % between 1999 and 2004 in the face of increases in demands for cannabis and cocaine treatment <sup>(178)</sup>.

It has been previously reported that the population of clients requesting treatment for opioid use is an ageing one, and this trend continued in 2004. Nearly all opioid users seeking treatment are over 20 years old, and almost half of them are over 30. Data available at European level show that only

a small group of opioid users (less than 7 %) are younger than 20 when they first seek help <sup>(179)</sup>. There are occasional reports of very young people (aged less than 15) seeking treatment for heroin use <sup>(180)</sup>, for example children aged 11–12 in Sofia, Bulgaria, but, in general, demand for treatment for heroin appears to be rare among the young.

Opioid clients are reported to be marginalised in society, with low levels of education, high unemployment rates and often unstable accommodation; Spain reports that 17–18 % of opioid clients are homeless.

Most opioid clients report having used these drugs for the first time between the age of 15 and 24 years, with around 50 % of clients first using the drug before the age of 20 <sup>(181)</sup>. Since the time lag between first use and first demand for treatment is generally between 5 and 10 years and the time between initiation and regular drug use is estimated to be 1.5–2.5 years (Finnish national report), it can be concluded that opioid clients typically experience 3–7 years of regular drug use before first seeking specialised treatment.

Across Europe, among new opioid clients seeking treatment in outpatient centres and for whom the route of administration is known, just over half are injecting the drug. In general, levels of injecting are higher among opioid users seeking treatment in the new Member States (above 60 %) than in the EU-15 Member States (below 60 %), with the exception of Italy and Finland, where the proportion of opioid injectors among clients is 74 % and 79.3 % respectively. The proportion of injectors among opioid clients is lowest in the Netherlands (13 %) and highest in Latvia (86 %) <sup>(182)</sup>.

## Treatment of opioid dependence

The EU drug strategy 2005–12 places a high priority on improving the availability of and access to treatment and it calls on Member States to provide a comprehensive range of effective treatments. Historically, residential treatment represented an important setting for the treatment of problem opioid users. However, the increasing diversity of treatment options and, in particular, the considerable expansion of substitution treatment has meant that the relative importance of residential care has declined.

Data on the relative availability of different types of treatment for opioid problems in Europe are currently

<sup>(176)</sup> See Table TDI-5 in the 2006 statistical bulletin.

<sup>(177)</sup> See Table TDI-26 in the 2006 statistical bulletin; Reitox national reports.

<sup>(178)</sup> See Figure TDI-1 in the 2006 statistical bulletin.

<sup>(179)</sup> See Table TDI-10 in the 2006 statistical bulletin.

<sup>(180)</sup> [www.communitycare.co.uk](http://www.communitycare.co.uk)

<sup>(181)</sup> See Table TDI-11 in the 2006 statistical bulletin.

<sup>(182)</sup> See Table TDI-17 in the 2006 statistical bulletin.

limited. In response to an EMCDDA questionnaire, experts in most (16) Member States indicated that substitution treatment is the principal form of treatment available. However, in four countries (the Czech Republic, Hungary, Poland and Slovakia), drug-free treatment is reported to be more common, and in two countries, Spain and Sweden, a balance between medically assisted treatment and drug-free treatment options is reported.

Substitution therapy for opioid dependence (mainly treatment with methadone or buprenorphine) is in place in all EU Member States <sup>(183)</sup> as well as Bulgaria, Romania and Norway, and there is now a substantial European consensus that it is a beneficial approach to the treatment of problem opioid users, although in some countries it remains a sensitive topic (see Chapter 2). The role of substitution treatment is becoming less controversial internationally; the UN system came to a joint position on substitution maintenance therapy in 2004 (WHO/UNODC/UNAIDS, 2004), and in June 2006 WHO included both methadone and buprenorphine in its model list of essential medicines.

There is now a robust evidence base for the value of substitution programmes using drugs such as methadone or buprenorphine. Studies have shown that substitution therapy is associated with decreased use of illicit drugs, reduced rates of injecting, a reduction in behaviours associated with a high risk of spread of HIV or other infectious diseases, such as sharing of equipment, and improvements in both social functioning and general health. Research has also suggested that levels of criminal activity may be reduced and that sufficient provision of substitution treatment may have an impact on the number of drug-related deaths. Optimum outcomes depend on timely entry into the programme, sufficient duration and continuity of substitution treatment, and adequate doses of medication.

While methadone continues to be the most commonly prescribed substitution treatment in Europe, treatment options are still expanding, and buprenorphine is now available in 19 EU countries, Bulgaria and Norway, although it is not clear whether it is officially approved for maintenance treatment in all countries where it is reported to be used. Considering that high-dosage buprenorphine treatment was introduced in Europe only 10 years ago, the drug's popularity as a therapeutic option has developed remarkably quickly (see Figure 1) <sup>(184)</sup>.

Long-term drug substitution is not the only purpose of opioid pharmacotherapy. Methadone and buprenorphine are also used to treat opioid withdrawal, when the therapeutic goal is to help the individual achieve abstinence by giving a reducing dose over a fixed period to help minimise the distress of withdrawal. The opioid antagonist naltrexone, an aversive pharmacotherapy option for opioid dependence, is also sometimes used as an aid to prevent relapse, as it blocks the effects of heroin, although the evidence base for the use of this drug is still inconclusive.

Some countries (Germany, Spain, the Netherlands and the United Kingdom) also have heroin prescription programmes, although the number of patients receiving this kind of treatment is very small compared with other forms of drug substitution (probably constituting less than 1 % of the total). This form of treatment remains controversial and is generally provided on a scientific trial basis for long-term users in whom other therapeutic options have failed.

A recent review of the effectiveness of drug dependence treatment in preventing HIV transmission found that behavioural interventions can enhance the positive effects of substitution treatment on HIV prevention, whereas the effectiveness of psychological therapy alone is variable. Abstinence-based treatment showed good outcomes with regard to HIV prevention for those who remain in treatment for three months or more (Farrell et al., 2005).

### Monitoring methadone provision

Methadone is a controlled drug according to Schedule I of the 1961 Single Convention on Narcotic Drugs, and levels of domestic consumption are monitored annually by the INCB.

According to the EMCDDA, as a minimum estimate from the EU Member States, Bulgaria, Romania and Norway more than 500 000 clients received substitution treatment during the year (see Table 4 in the 2005 annual report). Excluding the Czech Republic and France, where high-dose buprenorphine treatment (HDBT) is reported to be the most common option, more than 90 % of treatments in all other countries were with methadone.

The EU and the USA together account for 85 % of the world's methadone consumption, and methadone consumption in these countries has shown a steady increase over the last decade. Amounts consumed stabilised in both regions between 1997 and 2000, but there has been a

<sup>(183)</sup> In Cyprus, the use of methadone in detoxification treatment is reported since 2004 and the beginning of a methadone maintenance treatment pilot project has been announced, but no cases in treatment have been reported. In Turkey, methadone is officially registered for the treatment of opioid dependency, but no treatment cases have been reported.

<sup>(184)</sup> See the selected issue on buprenorphine in the 2005 annual report.

sharp increase in the United States since then. Currently, levels of methadone consumption in the EU are about half those of the USA <sup>(185)</sup>.

As a rule, noticeable increases in consumption figures follow the introduction of this treatment option at national level. For example, in France, the widespread implementation of methadone substitution treatment in 1995

resulted in a rapid increase in consumption, from 31 kg in 1995 to 446 kg in 2004.

Recently, signs of a stabilisation in levels of methadone consumption can be observed in the statistics for Denmark, Spain, Malta, the Netherlands, and possibly Germany. This matches reported trends in the number of clients in treatment (see Chapter 2).

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<sup>(185)</sup> See Figure NSP-2 in the 2006 statistical bulletin.



## Chapter 7

# Drug-related infectious diseases and drug-related deaths

### Drug-related infectious diseases

One of the more serious health consequences of the use of illicit drugs, and in particular of drug injection, is the transmission of HIV and other infectious diseases, notably hepatitis C and B. The relationship between drug injecting and the transmission of infection is well established. Reducing drug injecting and the sharing of injecting equipment has therefore become a primary goal of public health interventions in this area. Studies also point to a relationship between drug use and high-risk sexual activity; this suggests a growing importance in linking drug use interventions with public health strategies aimed at sexual health. In terms of monitoring at the European level, data on infectious disease are collected by regular notification sources, where drug injecting may be recorded as a risk factor, and during special studies of drug-using populations in different settings.

#### HIV and AIDS

##### Recent trends in newly reported HIV cases

At present, most countries report low rates of newly diagnosed HIV infection attributed to injecting drug use. Countries that have maintained consistently low rates of HIV infection among injecting drug users (IDUs) provide an opportunity to explore what factors can account for this, a question posed by the current EU drug action plan and currently a focus of an EMCDDA coordinated study. Complacency should be avoided, however; neither Spain nor Italy, both of which have experienced HIV epidemics among IDUs, provides national HIV case reporting data, and this has a significant negative impact on the value of these data for describing the overall EU picture. Furthermore, data emerging from some countries are raising concerns that HIV infection may be increasing, at least among some populations of IDUs.

In France, where HIV cases have been recorded only since 2003, there has been an increase in the incidence of HIV among IDUs (albeit from a low level), from an estimated 2.3 cases per million population in 2003 to 2.9 cases in

2004. Although this generally agrees with the available study data (see below), it must be remembered that new reporting systems are often initially unstable. In Portugal, an apparent decline in newly diagnosed cases of HIV among IDUs recorded previously is called into question by the 2004 data, which reveal an incidence of HIV infection of 98.5 cases per million population, the highest in the EU <sup>(186)</sup>. In the United Kingdom, the incidence of HIV among IDUs has slowly increased but is now stable at just under 2.5 cases per million population per year. In Ireland, the incidence increased during the late 1990s to a peak of 18.3 cases per million per year in 2000, fell to 9.8 per million in 2001, and subsequently increased to 17.8 cases per million in 2004.

HIV outbreaks related to injecting drug use occurred as recently as 2001 in Estonia and Latvia, and 2002 in Lithuania. Since then rates have strongly declined; a decline in the rates of newly reported cases is to be expected after an initial epidemic phase as an endemic level of infection becomes established (see below).

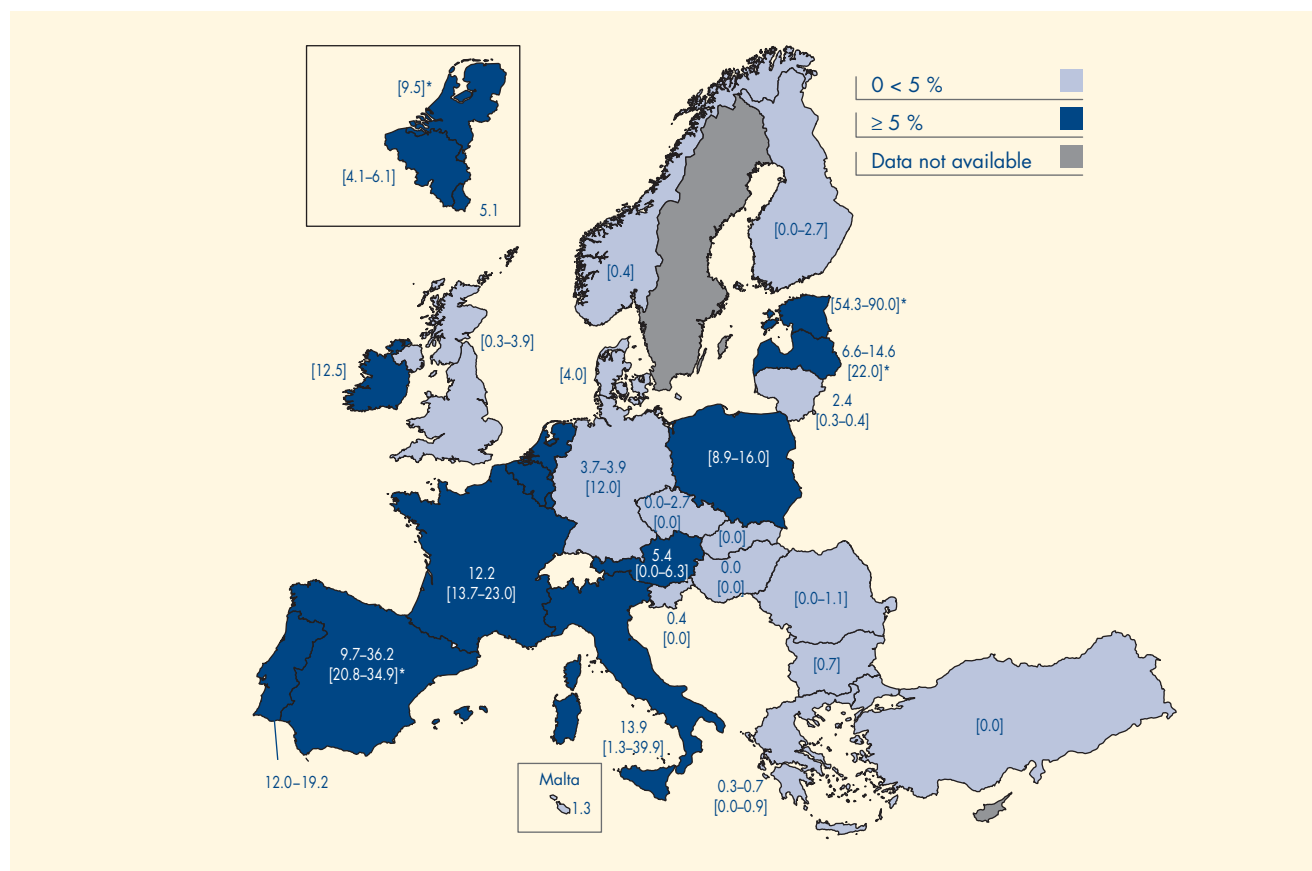
##### HIV seroprevalence among tested IDUs

Seroprevalence data from IDUs (percentage infected in samples of IDUs) are an important complement to HIV case reports. Repeated seroprevalence studies and routine monitoring of data from diagnostic tests can support conclusions drawn from case reporting data and can provide more detailed information on specific regions and settings. However, prevalence data come from a variety of sources and, in some cases, may be difficult to compare; thus, they should be interpreted with caution.

The recent increases in HIV in some countries recorded in the case reporting data are mostly confirmed by the available seroprevalence data, although the latter would suggest that these are not the only countries in which increased vigilance is necessary.

In the Baltic states, the available seroprevalence data indicate that transmission among IDUs may still not be under control (Figure 10). In Estonia, a recent study suggests that prevalence in IDUs is increasing in one region (Tallinn: from

<sup>(186)</sup> See Figures INF-2 (part i) and INF-2 (part ii) in the 2006 statistical bulletin.

**Figure 10:** HIV prevalence in tested injecting drug users, 2003–04

NB: Figures in brackets are local data. Colour indicates midpoint of national data or, if not available, of local data.

Data for Italy and Portugal include non-injectors and are likely to underestimate prevalence in injectors.

\* Data in part or totally before 2003 (Spain 2002–03; France 2002–03; Latvia 2002–03; Netherlands 2002) and from 2005 for Estonia.

Sources: Reitox national focal points. For primary sources, study details and data before 2003 or after 2004, see Table INF-8 in the 2006 statistical bulletin.

41 % of a sample of 964 in 2001 to 54 % of 350 in 2005) and exceptionally high in another (Kohtla-Järve: 90 % out of 100). In Latvia, two time series of seroprevalence data among IDUs show a continued increase until 2002/03 while a third series suggests a decrease since the peak in 2001. In Lithuania, data for 2003 suggest an increase in HIV among tested IDUs in drug treatment, needle exchanges schemes and hospitals, from between 1.0 % and 1.7 % during 1997–2002 to 2.4 % (27/1 112) in 2003.

In the countries that have historically had high rates of HIV infection among IDUs (Spain, France, Italy, Poland and Portugal) there are new signs of continuing transmission at national level or in specific regions or among specific subgroups of IDUs<sup>(187)</sup>. In these countries, it is important to note that the high background prevalence, resulting from the large-scale epidemics that occurred in the 1980s and 1990s, increases the likelihood that high-risk behaviour will lead to infection.

In Spain and Italy, national data from case reporting are not available. Data from routine diagnostic tests are difficult to interpret as they may be affected by different selection biases; however, they are a cause for concern in these countries. In Spain, HIV prevalence among young IDUs (under 25) tested in drug treatment was stable until 2002, at over 12 %, and among new IDUs (defined as injecting for less than two years) increased from 15 % to 21 % in 2000–01, suggesting a high incidence up to 2002. In Italy, trends in prevalence among IDUs differ strongly between regions, and some regions still show pronounced and recent increases (Bolzano, Liguria, Molise, Toscana and Umbria).

In Poland, local studies suggest that HIV spread has continued at least until recently, based on high prevalence rates among young IDUs (15 % in 2002 in one region, 4–11 % in two other regions in 2004). In the 2002 study, four cases (9 %) of HIV were reported among the 45 new

<sup>(187)</sup> See Figure INF-5 (part ii) and (part vi) in the 2006 statistical bulletin.

injectors in the sample; however, in the 2004 study no cases were found among the 20 new injectors in the sample.

Finally, in some countries that have never experienced large-scale epidemics among IDUs, some recent prevalence data suggest that vigilance is warranted. This would seem to be the case in Luxembourg, Austria and the United Kingdom, although the increases remain limited and are not confirmed by case reporting data.

### Low HIV prevalence countries

HIV prevalence among tested IDUs continues to vary widely between countries in the EU (Figure 10). In a number of countries HIV prevalence among IDUs has recently increased or has been high for many years. In contrast, in several countries, HIV prevalence among IDUs remained very low during 2003–04: HIV prevalence was less than or around 1 % in the Czech Republic, Greece, Hungary, Malta, Slovenia (based on national samples), and in Slovakia, Bulgaria, Romania, Turkey and Norway (based on subnational samples). In some of these countries (e.g. Hungary), both HIV prevalence and hepatitis C virus (HCV) prevalence are among the lowest in Europe, suggesting low levels of injecting (see 'Hepatitis B and C'), although in some countries (e.g. Romania) there is evidence that the prevalence of hepatitis C is increasing.

### Sex differences in HIV prevalence among tested IDUs

Available seroprevalence data for 2003–04 reveal differences between male and female tested IDUs <sup>(188)</sup>. Combined data from Belgium, Estonia (2005), Spain (2002), France, Italy, Luxembourg, Austria, Poland and Portugal resulted in a total sample of 124 337 males and 20 640 females, tested mostly in drug treatment centres or other drug service provision sites. Overall prevalence was 13.6 % among males and 21.5 % among females. Differences between countries are marked, with female to male ratios being highest in Estonia, Spain, Italy, Luxembourg and Portugal, while Belgium shows the opposite trend, with prevalence being higher among males.

### AIDS incidence and availability of HAART

As highly active antiretroviral treatment (HAART), available since 1996, effectively stops progression of HIV infection to AIDS, AIDS incidence data have become less useful as an indicator for HIV transmission. However, they still show the overall burden of symptomatic disease and in addition form an important indicator of the introduction and coverage of HAART among IDUs.

WHO estimates that coverage of HAART among patients in need of treatment was high in western European countries (over 70 %) in 2003, but more restricted in most eastern European countries, including Estonia, Lithuania and Latvia <sup>(189)</sup>. More recent data on the coverage of HAART suggest that the situation has markedly improved, with all EU and candidate countries now achieving at least 75 % coverage. Specific data regarding availability of HAART among IDUs are not available, however, and it remains to be seen whether improved coverage will be reflected in a reduction in the incidence of AIDS among IDUs in Estonia and Latvia.

In all four countries in western Europe most affected by AIDS, i.e. Spain, France, Italy and Portugal, the incidence has declined, since about 1996 in the case of the first three countries, but only since 1999 in Portugal. Portugal is still the country with the highest incidence of IDU-related AIDS, with 31 cases per million population in 2004. However, in Latvia the incidence is similar: 30 cases per million.

EuroHIV data up to 2004 (corrected for reporting delay) suggest that the incidence of IDU-related AIDS is increasing in both Estonia and Latvia <sup>(190)</sup>.

## Hepatitis B and C

### Hepatitis C

The prevalence of antibodies against hepatitis C virus (HCV) among IDUs is, in general, extremely high, although there is wide variation both within and between countries. Prevalence rates of over 60 % among various IDU samples tested in 2003–04 are reported from Belgium, Denmark, Germany, Greece, Spain, Ireland, Italy, Poland, Portugal, the United Kingdom, Romania and Norway, while prevalence rates less than 40 % have been found in samples from Belgium, the Czech Republic, Greece, Cyprus, Hungary, Malta, Austria, Slovenia, Finland and the United Kingdom <sup>(191)</sup>.

HCV antibody prevalence data among young IDUs (aged under 25) are available from 14 countries, although in some cases sample sizes are small. There is wide variation in results, with countries reporting both high and low figures from different samples. The highest prevalence rates among young IDUs in 2003–04 (over 40 %) were found in samples from Belgium, Greece, Austria, Poland, Portugal, Slovakia and the United Kingdom, and the lowest prevalence (under 20 %) in samples from Belgium, Greece, Cyprus, Hungary, Malta, Austria, Slovenia, Finland, the United Kingdom

<sup>(188)</sup> See Figure INF-3 (part v) in the 2006 statistical bulletin.

<sup>(189)</sup> See Figure INF-14 (part iii) and (part iv) in the 2006 statistical bulletin.

<sup>(190)</sup> See Figure INF-1 (part i) in the 2006 statistical bulletin.

<sup>(191)</sup> See Figure INF-6 (part i) in the 2006 statistical bulletin.



and Turkey. Considering only studies of young IDUs with national coverage, the highest prevalence rates (over 60 %) are found in Portugal and the lowest (under 40 %) in Cyprus, Hungary, Malta, Austria and Slovenia. Although the sampling procedures used may result in bias towards a more chronic group, the high prevalence of HCV antibodies found in a national sample in Portugal (67 % among 108 IDUs under 25 years) is still worrying and may be indicative of continuing high-risk behaviour among young IDUs (see also 'Recent trends in newly reported HIV cases', p. 75).

Data on HCV antibody prevalence among new injectors (injecting for less than two years) are scarce and suffer from small sample size, but they may provide a better proxy indicator of very recent incidence rates than data on young injectors. What information is available for 2003–04 shows that the highest prevalence rate among new injectors (over 40 %) was found in samples from Greece, Poland, the United Kingdom and Turkey and the lowest prevalence (under 20 %) in samples from Belgium, the Czech Republic, Greece, Cyprus and Slovenia. Low prevalence rates have been found in small but national samples of new injectors in Cyprus (only two of 23 injectors tested positive for HCV antibodies, a rate of 9 %), and Slovenia (two out of 32 tested positive, or 6 %).

## Hepatitis B

The prevalence of hepatitis B virus (HBV) markers also varies greatly both within and between countries. The most complete data are for anti-HBc, which indicates a history of infection. In 2003–04, prevalence rates of over 60 % among IDU samples were reported from Italy and Poland, while samples with prevalence rates of less than 20 % were recorded in Belgium, Ireland, Cyprus, Austria, Portugal, Slovenia, Slovakia and the United Kingdom. Hepatitis B notification data for the period 1992–2004, for those countries from which data are available, show a very diverse picture <sup>(192)</sup>. In the Nordic region, the great majority of notified acute cases of hepatitis B occur among IDUs, and hepatitis B outbreaks have coincided with increases in drug injecting in several countries. For example, the data for Norway suggest a strongly increasing incidence of hepatitis B infections among IDUs between 1992 and 1998 with a decline thereafter. In Finland, hepatitis B notifications among IDUs have fallen steeply in recent years, possibly as a result of vaccination programmes and a comprehensive needle and syringe exchange system.

## Preventing infectious diseases

### Effective responses

A number of public health interventions have been shown to be useful in reducing the spread of infectious diseases among drug users and there is a growing consensus that a comprehensive approach to service provision in this area is most likely to be successful. Historically, the debate has largely focused on the prevention of HIV infection among drug injectors, but the need for effective measures to inhibit the spread of hepatitis has increasingly become recognised, as has the need to prevent the spread of infectious diseases among non-injecting drug users.

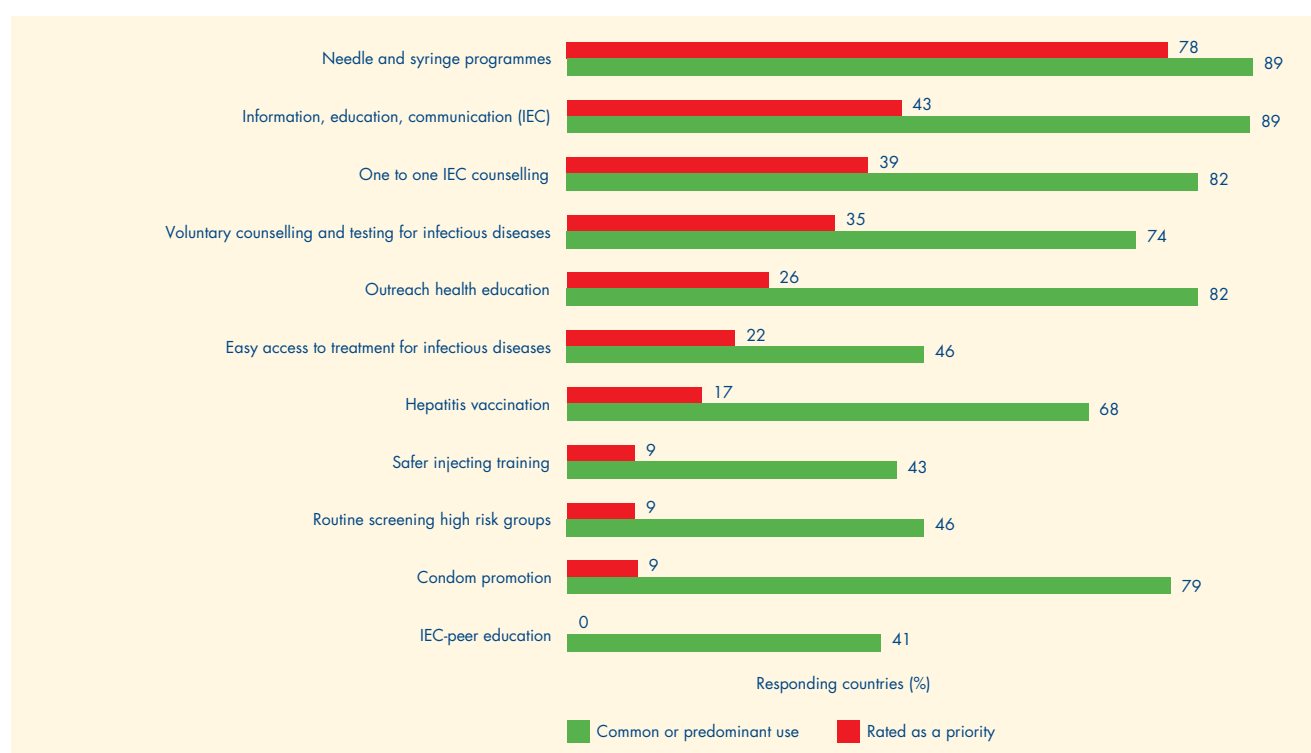
It must be noted that evidence on effectiveness is strongest for the prevention of HIV infection among drug injectors. A robust body of available evidence shows that interventions can be considered effective and that access to treatment of all types provides protection (Farrell et al., 2005; WHO, 2005). Since the mid-1990s, the European response has been characterised by an increasing provision of drug dependence treatment (see Chapter 2), and overall this appears to be one of the elements that have contributed to the relatively encouraging picture now seen in Europe in terms of epidemic spread of HIV among injectors.

Treatment is only one part of a comprehensive approach to HIV prevention. Other elements include a range of information, education and communication techniques, voluntary infectious disease counselling and testing, vaccination and the distribution of sterile injecting equipment and other prophylactics. These measures, as well as the provision of medical treatment services at low-threshold agencies, or even sometimes at street level, can help to establish or improve communication with active drug users and their sexual partners regarding the risk and prevention of the health consequences of drug use.

A general commitment to a comprehensive approach does not mean that all these service elements are equally developed or supported at national level. However, some consensus appears to be emerging. In a survey among NFPs, three out of four respondents identified needle and syringe programmes combined with counselling and advice as a priority in the national policy that addresses the spread of infectious disease among drug injectors (Figure 11).

<sup>(192)</sup> See Figure INF-12 (part i) in the 2006 statistical bulletin.

**Figure 11:** Priority for and extent of use of selected measures to prevent infectious diseases in drug users, according to national expert opinion: summary for responding countries



NB: Priority ratings from 23 EU countries plus Bulgaria and Norway. Countries not supplying these ratings were Ireland, Cyprus, Lithuania and the Netherlands. Ratings on the 'extent of use' were provided by experts from all 25 EU countries plus Bulgaria and Norway. The French and Flemish Communities in Belgium provided separate ratings, bringing the total number of replies to 28.

Sources: National focal points expert survey, SQ 23 (2004) question 5.

That so many countries now explicitly recognise the role of providing clean injecting material as part of their HIV prevention strategy illustrates how this form of provision has become mainstream in most of Europe and is no longer regarded as a controversial issue in most countries. That is not to say that there is uniform agreement on the benefits of this kind of provision. Greece and Sweden, for example, did not rate it as a policy priority, although overall a relatively homogeneous picture emerges across the EU in terms of the implementation of interventions in this area <sup>(193)</sup>, with all countries except Cyprus reporting the existence of programmes for the exchange or distribution of sterile needles and syringes <sup>(194)</sup>.

### Types of needle and syringe programmes in European countries

Although most European countries now distribute sterile injecting equipment, the nature and range of provision vary between countries. The most common model is to provide the service in a fixed location, usually a specialised drugs

service, but often this type of provision is complemented by mobile services that attempt to reach out to drug users in community settings. Syringe exchange or vending machines complement the available NSP services in eight countries <sup>(195)</sup>, although provision appears to be restricted to a handful of sites, with only Germany and France reporting substantial activities (around 200 and 250 machines respectively). Spain is the only EU country where needle and syringe exchange is regularly available in a prison setting, with provision available in 27 prisons in 2003. The only other EU country reporting activity in this area is Germany, where provision is limited to one prison.

Pharmacy-based exchange schemes also help to extend the geographical coverage of the provision and, in addition, the sale of clean syringes in pharmacies may increase their availability. The sale of syringes without prescription is permitted in all EU countries except Sweden, although some pharmacists are unwilling to do so and some will even actively discourage drug users from patronising their premises.

<sup>(193)</sup> See Figure NSP-3 in the 2006 statistical bulletin.

<sup>(194)</sup> See the 2005 annual report for a brief summary of the evidence on effectiveness of needle and syringe programmes (p. 68).

<sup>(195)</sup> See Table NSP-2 in the 2006 statistical bulletin.

Formally organised pharmacy syringe exchange or distribution networks exist in nine European countries (Belgium, Denmark, Germany, Spain, France, the Netherlands, Portugal, Slovenia and the United Kingdom), although participation in the schemes varies considerably, from nearly half of pharmacies (45 %) in Portugal to less than 1 % in Belgium. In Northern Ireland, needle and syringe exchange is currently organised exclusively through pharmacies.

The purchase of syringes through pharmacies may be a major source of contact with the health service for some injectors, and the potential to exploit this contact point as a conduit to other services clearly exists. Work to motivate and support pharmacists to develop the services they offer to drug users could form an important part of extending the role of pharmacies, but to date only France, Portugal and the United Kingdom appear to be making significant investments in this direction.

## Mortality and drug-related deaths

### Mortality among problem drug users

Most information on mortality among problem drug users in Europe refers to opioid users. Mortality related to other forms of drug use is less well known but remains an important public health issue.

A collaborative study that started within an EMCDDA project examined mortality among opioid users recruited in treatment in eight European locations <sup>(10)</sup>. The study found a very high mortality among opioid users compared with their peers: 6–20 times higher among males and 10–50 times higher among females. It was estimated that in six of the locations (Amsterdam, Barcelona, Dublin, London, Rome and Vienna) 10–23 % of the overall mortality among adults aged 15–49 years could be attributed to opioid use, mainly overdoses, AIDS and external causes (accidents, suicides). Roughly one third of these drug-related deaths were due to overdoses, although this proportion was higher in cities with a low prevalence of HIV infection among drug injectors, and is likely to increase once highly active antiretroviral treatment (HAART) becomes more widely available.

A mortality cohort study carried out in the Czech Republic found that the mortality of stimulant users was 4–6 times higher (standardised mortality ratio — SMR) than that of the general population, while that of opioid users was 9–12 times higher. A French cohort study that followed individuals arrested for heroin, cocaine or crack use found that male mortality was five times higher and female

### Syringe coverage in Europe: is it sufficient?

Although nearly all Member States report some availability of needle and syringe programmes (NSPs), the impact of this kind of intervention depends on the level of provision being adequate to meet the needs of IDUs.

Recent estimates of the number of injecting drug users and of the number of syringes distributed through NSPs are available for nine European countries. From these data, it is possible to make a crude estimation of the annual number of syringes available per injector <sup>(1)</sup>. Based on the most recent data available, coverage rates of NSPs vary considerably, with the number of syringes distributed per estimated IDU per year varying from 2–3 in Greece, through 60–90 in the Czech Republic, Latvia, Austria and Portugal, to approximately 110 in Finland, 210 in Malta and more than 250 in Luxembourg and Norway. In addition, syringes are also available from pharmacies, and data from the Czech Republic and Finland allow overall syringe availability to be estimated. Combining distribution and sales data suggests that, in a year, drug injectors obtain on average 125 syringes in the Czech Republic and 140 syringes in Finland.

Many factors are known to influence injecting frequency among those using drugs, including patterns of use, level of dependency and type of drug used. A recent study exploring the relationship between HIV prevalence and the coverage of syringe distribution suggested that behavioural factors, e.g. injecting frequency and personal reuse of syringes, strongly influence the level of syringe distribution required to achieve a substantial decrease in HIV prevalence (Vickerman et al., 2006).

The measurement of syringe coverage is an important component of understanding the likely effects of syringe distribution in disease prevention and for assessing unmet needs. However, it is important to take account of the availability of syringes through pharmacies sales (prices, density of pharmacy network) as well as drug injectors' behavioural patterns and environmental factors in interpreting these data. This issue is further discussed in the 2006 statistical bulletin.

<sup>(1)</sup> See the 2006 statistical bulletin for technical notes.

mortality 9.5 times higher than in the general population, but with a decreasing trend.

As opioid users age, mortality resulting from chronic conditions (cirrhosis, cancer, respiratory diseases, endocarditis, AIDS) adds to mortality due to external causes other than overdoses, such as suicide and violence (Dutch national reports, 2004 and 2005, from the Amsterdam municipal health service). The living conditions of drug

<sup>(10)</sup> Amsterdam, Barcelona, Dublin, Denmark, Lisbon, London, Rome and Vienna. Estimates of population mortality did not include Lisbon and Denmark. See EMCDDA (2002b).

users (for example, homelessness, mental illness, violence, poor nutrition) may also contribute substantially to the high mortality in this group.

In addition, AIDS related to intravenous drug use accounted for 1 528 deaths in 2002 <sup>(197)</sup>, although this is probably an underestimate. Other causes of drug-related deaths, such as illness (e.g. hepatitis), violence and accidents, are more difficult to assess, but it is likely that they account for an important number of deaths. It has been estimated that 10–20 % of deaths among young adults in European cities can be attributed to opioid use (see above). To this should be added mortality related to other forms of drug use, although this is very difficult to quantify.

### Drug-related deaths

Drug-related death is a complex concept. In some reports it refers only to deaths caused directly by the action of psychoactive substances, while in other cases it includes also deaths in which drug use played an indirect or circumstantial role (traffic accidents, violence, infectious diseases). A recent report that analysed the types of harm caused by illegal drug use in the United Kingdom estimated that drug-related death was the main harm related to drug use (MacDonald et al., 2005).

In this section, and in the EMCDDA protocol, the term 'drug-related deaths' refers to those deaths caused directly by the consumption of one or more drugs and, generally, occurring shortly after the consumption of the substance(s). Other terms used to describe such deaths include 'overdoses', 'poisonings', 'drug-induced deaths' or 'acute drug deaths' <sup>(198)</sup>.

Between 1990 and 2003, from 6 500 to over 9 000 deaths were reported each year by the EU countries, adding up to more than 113 000 deaths during this period. These figures can be considered as a minimum estimate owing to probable under-reporting in many countries <sup>(199)</sup>.

Population mortality rates due to drug-related death varied widely between European countries, ranging from 0.2 to over 50 deaths per million inhabitants (average 13). In most countries the figure lies in the range of 7–30 deaths per

million inhabitants, with rates of over 25 being found in Denmark, Estonia, Luxembourg, Finland, the United Kingdom and Norway. Among males aged 15–39 years, mortality rates are typically three times higher (averaging 40 deaths per million), with seven countries presenting rates over 80 deaths per million. Drug-related deaths accounted for 3 % of all deaths among Europeans aged 15–39 in 2003–04, and for more than 7 % in Denmark, Greece, Luxembourg, Malta, Austria, the United Kingdom and Norway. These figures should be considered minimum estimates, and it should also be taken into account that, despite improvements, there are still important differences in quality of reporting between countries, such that direct comparisons should be made with caution <sup>(200)</sup>.

### Opioid deaths

Opioids are present in most cases of 'acute drug-related deaths' due to illegal substances reported in the EU, although in many cases other substances are also identified during the toxicological examination, in particular alcohol, benzodiazepines and, in some countries, cocaine. In Europe most cases of opioid deaths are related to heroin, but other opioids play a role (see below) <sup>(201)</sup>.

Opioid overdose is one of the leading causes of death among young people in Europe, particularly among males in urban areas. At present, overdose is also the main cause of death among opioid users in the EU as a whole, in particular in countries with a low prevalence of HIV among injectors (see 'Mortality among problem drug users', p. 80).

The majority of drug users who overdose are men <sup>(202)</sup>, accounting for 65–100 % of cases, and in most countries the proportion ranges between 75 % and 90 %, with the highest proportion of females in the Czech Republic, Poland and Finland and the lowest in Greece, Italy and Cyprus. These findings must be interpreted in the context of differential rates of opioid use and injecting between men and women.

Most overdose victims are between 20 and 40 years old, with the mean age in most countries lying in the mid-30s (but ranging from 20 to 44 years). The mean age of overdose victims is lowest in Estonia, Slovenia, Bulgaria and Romania and highest in the Czech Republic, the Netherlands, Poland

<sup>(197)</sup> See EuroHIV (2005). The figure refers to the western and central areas of WHO Europe, which include some non-EU countries, and the total deaths for Estonia, Latvia and Lithuania (eastern area).

<sup>(198)</sup> This is the agreed common definition by the EMCDDA group of national experts. At present, most national case definitions are the same as the EMCDDA definition or very similar, although some countries still include cases due to psychoactive medicines or non-overdose deaths, generally as a limited proportion (see the 2006 statistical bulletin methodological note 'Drug-related deaths summary: definitions and methodological issues'. Section 1: EMCDDA definition and Section 2: National definitions and 'DRD standard protocol, version 3.0').

<sup>(199)</sup> See Tables DRD-2 (part i), DRD-3, DRD-4 in the 2006 statistical bulletin.

<sup>(200)</sup> See Table DRD-1 (part iii) and (part iv) in the 2006 statistical bulletin.

<sup>(201)</sup> See Figure DRD-1 in the 2006 statistical bulletin.

<sup>(202)</sup> As most cases reported to the EMCDDA are opioid overdoses, general characteristics of acute drug-related deaths are used for description of opioid cases.

and Finland. There are very few reported overdose deaths among people under the age of 15 years (17 cases out of a total number of deaths of 7 516, based on most recent data available for each country), although drug deaths in this age group could be under-reported. The EMCDDA figures include a few deaths among those over 65 years, with only seven countries reporting that more than 5 % of cases fall into this age group <sup>(203)</sup>.

In several new Member States and candidate countries the mean age at death is comparatively low (Estonia, Cyprus, Latvia, Slovakia, Bulgaria and Romania), and there is a high proportion of overdose cases younger than 25 years, which may signal a younger heroin-using population in these countries. The high mean age in the Czech Republic is related to the inclusion of many deaths due to psychoactive medicaments (Figure 12).

In many Member States, the age of overdose victims is increasing, suggesting a decrease in initiation to heroin

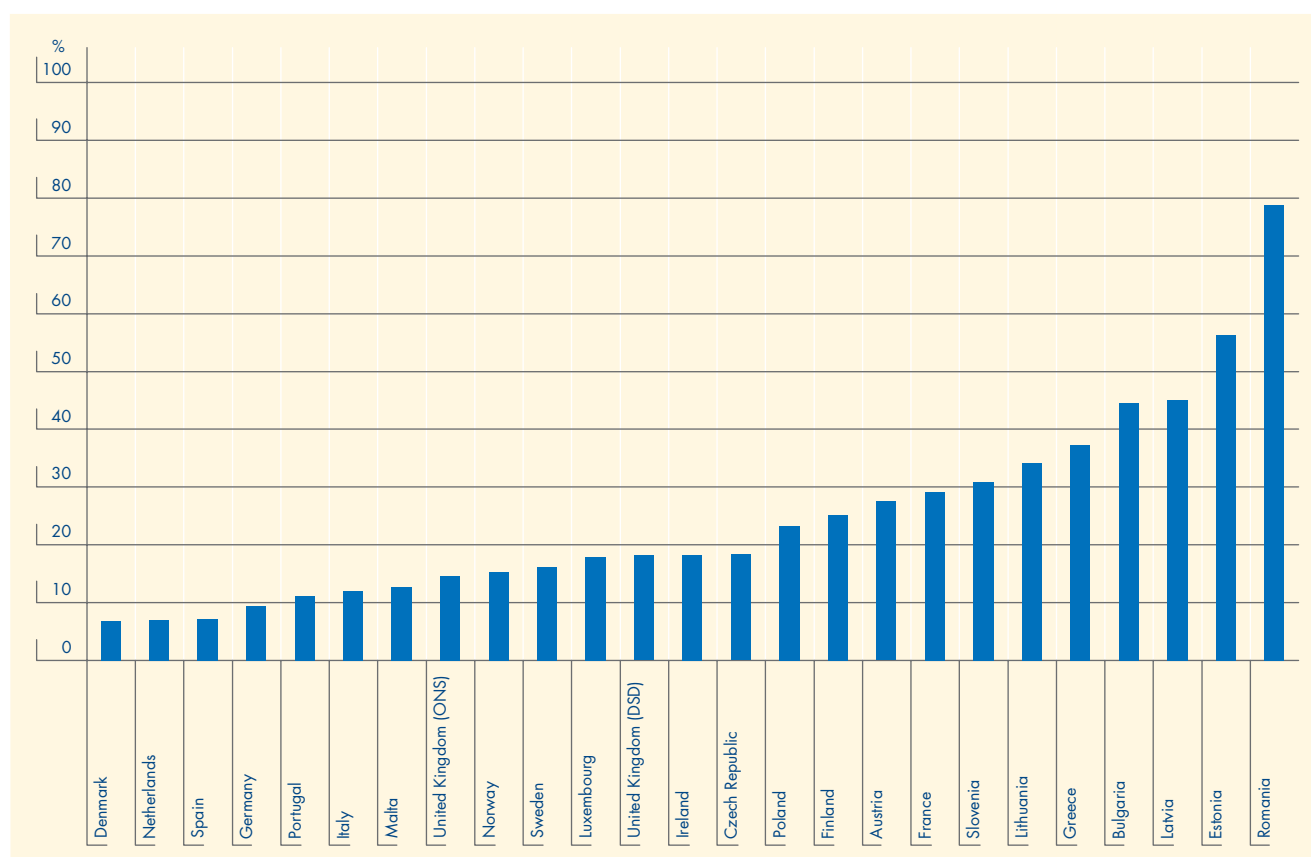
use among young people. This trend is common in EU-15 Member States and has been observed since the early 1990s, although in Sweden and the United Kingdom it is less marked. In new Member States the trend is less clear and a decrease in mean age is even observed in many cases <sup>(204)</sup>.

### Methadone deaths

Several countries reported the presence of methadone in a substantial proportion of drug-related deaths in their 2005 Reitox reports. The terminology used varies between countries, and in some cases it is difficult to determine what role methadone played in the death.

Denmark reported that methadone was the cause of poisoning (alone or in combination) in 44 % of deaths (95 out of 214 in 2004), a similar proportion to 2003, but with a clear increase from 1997; Germany reported that 345 cases were attributed to 'substitution substances' (46 alone and 299 with other narcotics in 2004) with

**Figure 12:** Proportion of acute drug-related deaths occurring under the age of 25 years in 2002



NB: ONS, Office of national statistics; DSD, drug strategy definition.

2002 was taken as reference as it is the year for which information is available for most countries.

Sources: Reitox national reports (2005), taken from national mortality registries or special registries (forensic or police). Based on 'national definitions' as presented in methodological notes on drug-related deaths in the 2006 statistical bulletin.

<sup>(203)</sup> See Table DRD-1 in the 2006 statistical bulletin.

<sup>(204)</sup> See Figures DRD-3 and DRD-4 in the 2006 statistical bulletin.

a clear decrease since 2002; and the United Kingdom reported 216 cases with 'mention' of methadone (England and Wales, in 2003), also with a clear decrease from 2002. Spain reported that there were few overdose cases involving methadone in isolation (2 %), but that it was frequently present in combination in opioid deaths (42 %) and cocaine deaths (20 %). Other countries did not report methadone deaths or the numbers reported were very small. It is unclear what factors lie behind these differences, and whether there is under-reporting of cases in some countries <sup>(205)</sup>.

Although research shows that substitution treatment reduces the risk of fatal overdose, it is important to monitor the number of deaths related to methadone and the circumstances surrounding the death (the source of the substance, whether it was consumed in combination with other substances, the point in the treatment process at which intoxication occurred) as part of the quality assurance monitoring for substitution programmes.

### Buprenorphine and fentanyl deaths

Deaths due to buprenorphine poisoning appear to be rare, a fact that is attributed to the agonist-antagonist pharmacological characteristics of this drug. However, some deaths have been reported by European countries.

In the 2005 national reports, only France and Finland recorded deaths related to this substance. In Finland, buprenorphine was found in 73 drug-related deaths in 2004, the same number as in 2003, and was generally combined with benzodiazepines, sedatives or alcohol. These high figures parallel increases in buprenorphine treatment in Finland, although the numbers treated are much lower than the estimated 70 000 to 85 000 people receiving buprenorphine in France. It is therefore interesting that in France only four cases of buprenorphine overdose were reported in 2004 (compared with eight cases in 2003). Even taking into account a possible under-reporting of poisonings in France, the scale of the differences is striking. In addition to France and Finland, three other countries reported cases (only two or three in each case) of death related to buprenorphine, but without evidence that the substance was the main causal agent.

In previous years deaths due to fentanyl have been reported in the countries surrounding the Baltic Sea, but no such reports were included in the 2005 national reports.

### Trends in acute drug-related deaths

National trends in drug-related deaths can provide some insight into developments in patterns of problematic drug use in each country such as heroin epidemics and high-risk behaviours (e.g. injection), as well as treatment provision and even differences in heroin availability. They can also, of course, reflect the success of medical emergency services policies in preventing fatal overdoses <sup>(206)</sup>.

Data available from the EU reveal some general trends in drug-related deaths. Among the EU-15 Member States, a sharp increase was apparent during the 1980s and early 1990s, possibly paralleling the expansion of heroin use and injecting. Drug deaths continued to increase between 1990 and 2000, although less sharply (Figure 13). The total annual number of drug-related deaths in those Member States providing information (most Member States, old and new) increased by 14 %, from 8 054 in 1995 to 9 392 in 2000.

Since 2000, many EU countries have reported decreases in the numbers of drug-related deaths, possibly related to increases in treatment availability and harm reduction initiatives, although declines in the prevalence of drug use may also be important. At European level, drug deaths fell by 6 % in 2001, 13 % in 2002 and by 7 % in 2003. Despite these improvements, there were still almost 7 000 reported drug-related deaths in 2003 (data from Belgium, Spain and Ireland are missing). However, among countries reporting data in 2004 (19), there was a small increase of 3 %. Although inferences about 2004 should be made with caution, 13 out of the 19 countries that reported information recorded an increase of some degree.

There is a marked discrepancy between trends in the old and new Member States in the number of deaths among people younger than 25 years. Among the EU-15 Member States there has been a steady decrease since 1996, suggesting a decrease in the number of young opioid injectors, while in new Member States a sharp increase was observed until 2000–02, with an apparent decrease beginning only in 2003 <sup>(207)</sup>.

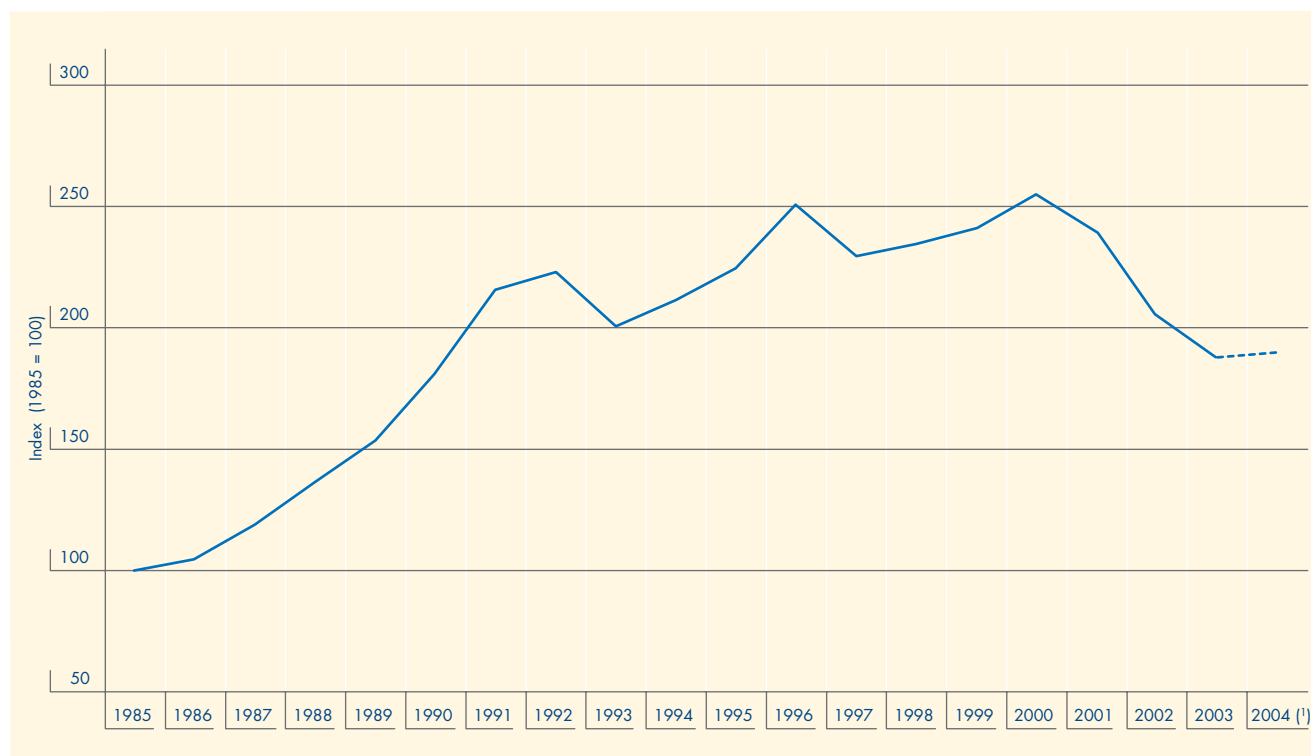
Gender differences are also observable. The number of deaths in males increased progressively from 1990 until 2000, followed by a clear decrease (a 30 % decline by 2003), whereas the number of reported deaths among females remained roughly stable between 1990 and 2000, oscillating between 1 700 and 2 000 per year, and has fallen by only 15 % since then. This could be

<sup>(205)</sup> An ongoing EMCDDA field trial aims to improve the quality of information provided on substances involved in drug-related deaths, including substitution substances.

<sup>(206)</sup> See Figure DRD-7 in the 2006 statistical bulletin.

<sup>(207)</sup> See Figure DRD-5 in the 2006 statistical bulletin.



**Figure 13:** Long-term trend in acute drug-related deaths, 1985–2004

(') Ten countries provided information for 2004 and six did not. Therefore, the figure for 2004 is provisional, based on a comparison of 2003 and 2004 data only for those countries providing data for both years.

NB: New Member States and candidate countries are not included in this figure owing to the lack of retrospective data in most cases.

See Table DRD-2 in the 2006 statistical bulletin for numbers of deaths in each country and notes on methodology.

Sources: Reitox national reports (2005), taken from general mortality registries or special registries (forensic or police).

due to a number of factors, including differential efficacy of interventions or differences in risk factors between the sexes <sup>(208)</sup>.

In countries with a longer series of data, different patterns of drug-related deaths can be detected. In some countries drug-related deaths peaked during the early 1990s and subsequently decreased, for instance in Germany, where drug-related deaths peaked in 1991–92, Spain (1991), France (1994) and Italy (1991). In other countries, for instance Greece, Ireland, Portugal, Finland, Sweden and Norway, drug deaths peaked later, between 1998 and 2001, and again subsequently declined. In other countries, the pattern was less clear or numbers were stable. Although interpretations should be made with caution, because of the relatively low numbers of drug-related deaths in some countries, these patterns could be related to the trends in heroin injection <sup>(209)</sup>.

### Deaths related to ecstasy and amphetamines

Deaths related to ecstasy started to be reported in Europe during the 1990s as the drug became popular. Ecstasy deaths cause considerable concern as they often occur unexpectedly among socially integrated young people.

Information on ecstasy deaths is limited, but data from 2005 Reitox national reports suggest that deaths involving ecstasy remain relatively unusual compared with opioid deaths, although in some countries the number is not negligible. In Europe as a whole, there were references to 77 deaths, which should be considered as a minimum estimate <sup>(210)</sup>. Cases were reported from Denmark (2), Germany (20), France (4), Hungary (3), and the United Kingdom (48 cases with 'mentions' — 33 in England and Wales), where probably reporting is better than in other countries. In Spain, ecstasy was present in 2.5 % of drug poisonings.

<sup>(208)</sup> See Figure DRD-6 in the 2006 statistical bulletin.

<sup>(209)</sup> See Figure DRD-7 in the 2006 statistical bulletin.

<sup>(210)</sup> Depending on country, figures refer to 2003 or 2004, for ecstasy and cocaine.



The issue of the risk of ecstasy use has often been raised. Bearing in mind the margin of error in survey-based estimates of prevalence and the difficulties in reporting drug deaths, dividing the number of fatalities observed by the number of users per year <sup>(211)</sup> (people at potential risk) yields rates of 5–8 cases and 2–5 cases per 100 000 users in the two countries for which this calculation can be made.

Amphetamine deaths are also infrequently reported, although in the Czech Republic 16 deaths were attributed to pervitin (methamphetamine) in 2004, almost double the 2003 figure, correlating with an increase in the estimated number of problem pervitin users and treatment demands. For GHB deaths see Chapter 4.

### Deaths related to cocaine

There is increasing concern about the health risks of cocaine use, following increases in recreational use observed in some countries among young people, among people being treated for addiction and among marginalised populations.

Cocaine use is frequent among opioid users, and it is common to find cocaine in toxicological analyses of opioid overdoses, as well as other substances such as alcohol and benzodiazepines. Cocaine is commonly consumed together with alcohol, a combination that may result in increased toxicity.

Current statistics available in Europe are limited, and variation in the criteria used to identify cocaine-related cases means that figures are not comparable; in addition, some cocaine-related deaths may go unrecognised or unreported, resulting in under-reporting. The data that do exist indicate that many deaths involving cocaine also involve opioids.

Among the countries supplying data, over 400 cocaine deaths were identified in the 2005 national reports; this is a minimum estimate. In most of these cases, cocaine seems to have played a causal role, although this is not always entirely clear from the reports. Nine countries did not explicitly mention the existence or absence of cocaine deaths. Cocaine accounted for 0–20 % of reported acute drug deaths, representing between 10 % and 20 % of such deaths in Germany, Spain, France, the Netherlands and the United Kingdom. Deaths in which cocaine played a causal role (alone or in combination) were reported by Germany (166), Spain (53), France (14), the Netherlands (20) and the United Kingdom (142 ‘mentions’ — 113 in England and Wales). Nine other countries reported from zero to two cases. In addition, cocaine is commonly found in toxicological analyses of opioid overdoses in some countries.

From the limited data available, it is difficult to identify trends with certainty, but an increasing trend seems to exist in all countries with larger number of cases, i.e. Germany, Spain, France, the Netherlands and the United Kingdom, although in the Netherlands increases have halted in the last two years.

In addition, cocaine may be a contributor to deaths due to cardiovascular problems (arrhythmias, myocardial infarction, cerebral haemorrhages), particularly in users with predisposing conditions or risk factors (tobacco, hypertension, angiomas) or with increasing age. Many of these cases may go unnoticed at present because of a lack of awareness. Further research is needed in this area.

## Reducing drug-related deaths

### Effective responses

Reaching out to untreated populations of drug users and establishing links for communication is a precondition for risk education and management, and for mediating access to services, including treatment.

Research into the circumstances of overdoses has supported the development of interventions that target high-risk situations or high-risk individuals. Such measures may achieve an important reduction in the deaths attributable to the immediate effects of drug taking. The role of different interventions in reducing acute drug-related overdose deaths was summarised in a recent EMCDDA policy briefing (EMCDDA, 2004d).

As most overdose deaths in Europe involve heroin, increasing the proportion of heroin users in treatment can be viewed as an overdose prevention measure. A number of factors may be responsible for recent modest reversals in the trend in overdose deaths observed in some Member States. These include decreases in prevalence and injecting rates, increased prevention efforts, increased availability and uptake of, and retention in, treatment and possibly reductions in risk-taking behaviour.

### Profile of responses

In most countries, expert opinion on the use of different intervention strategies to reduce drug overdose deaths considers opioid substitution treatment to be the most valuable approach <sup>(212)</sup>. In Hungary and Sweden, although this type of treatment is available, it is not considered a means of reducing drug deaths. And in Estonia and Poland, the low level of substitution treatment provision means that

<sup>(211)</sup> Last 12 months' use in population surveys.

<sup>(212)</sup> Results based on a survey conducted through 27 NFPs in 2004. The instrument can be downloaded at <http://www.emcdda.europa.eu/?nnodeid=1333>

methadone substitution treatment is not currently considered a major response to reduce overdose deaths.

Information, education and communication (IEC)-oriented responses are further important measures in most European countries. The dissemination of risk awareness messages and overdose management instructions via specifically developed printed materials or other media (flyers, websites, mass media campaigns) is common or predominant in 19 countries. However, seven countries (Estonia, France, Ireland, Latvia, Hungary, Malta, Finland) use such measures rarely, and one country (Sweden) not at all.

According to the NFPs, the approach of systematically integrating an individual risk assessment into counselling and treatment routines and organising group sessions on risk education and response for drug users is less common.

A broad category of activities can be defined as 'prison pre-release interventions'. These ranged from simple information dissemination, through counselling on overdose risks and prevention, to initiation or continuation of substitution treatment in prison. However, activities falling into this spectrum of responses were rarely used in 13 countries and not in use at all in another five (Latvia, Hungary, Poland, Romania and Sweden). In Spain, Italy and the United Kingdom, prison interventions are among the predominant approaches to a reduction in acute drug deaths.

Local conditions of risk related to public injecting have led to the opening of professionally supervised drug consumption facilities in four EU countries and Norway <sup>(213)</sup>. Their target groups are highly marginalised and risk-prone street injectors (EMCDDA, 2004c).

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<sup>(213)</sup> The EU countries are Germany, Spain, Luxembourg and the Netherlands.



## Chapter 8

# Improving the monitoring of problem consumption and multiple drug consumption

Drug addiction, drug dependence, drug abuse, harmful use, problem use: there are a variety of concepts associated with the EMCDDA problem drug use indicator, each carrying its own subtle distinctions in medical or social dimensions. The EMCDDA indicator of problem drug use (PDU) monitors 'injecting drug use or long-duration/regular use of heroin, cocaine and/or amphetamines'. Included in the definition, by convention, is the use of other opioids such as methadone.

This definition of PDU is a purely behavioural one based on drug consumption patterns and does not explicitly measure problems in any sense. Nonetheless, it is linked to the various concepts of addiction by the understanding that someone behaving in this way is very likely to fall within the more general concept of a 'problem user'. It is important to note in this respect that the PDU indicator estimates only an important subgroup of those who can be thought of as having a drug problem of some form. Nevertheless, the approach does have value. As a behaviourally determined concept, its virtues are that:

- it has allowed monitoring to proceed without being tied to definitions of addiction, dependence, harm and problem itself;
- it is relatively easy to operationalise in research studies;
- it groups together different types of drugs and modes of administration as alternatives, without specifically differentiating between them.

Historically speaking, the EMCDDA monitoring indicator was a child of its time — during the 1980s, and to a large extent the 1990s, heroin use and injecting drug use were seen as key components of the drug problem that required estimation. Furthermore, these forms of drug use could not be measured convincingly by survey techniques. The addition of amphetamines made the definition appropriate for some of the Nordic countries where injecting amphetamine use was important; and, although cocaine was included, in practice it was rarely a significant component in any estimates. While the PDU indicator still gives us a useful window on an important element of the drug problem, it is increasingly apparent that it needs further development to meet the requirements of monitoring today's more heterogeneous

European drug situation. Increasingly, we are seeing a more complex picture with respect to chronic drug problems in Europe. To keep its relevance to a changing world of illicit drugs, the monitoring task has to move forward and meet the challenges of covering a broader spectrum of drugs, and covering their use in finer detail than it has to date.

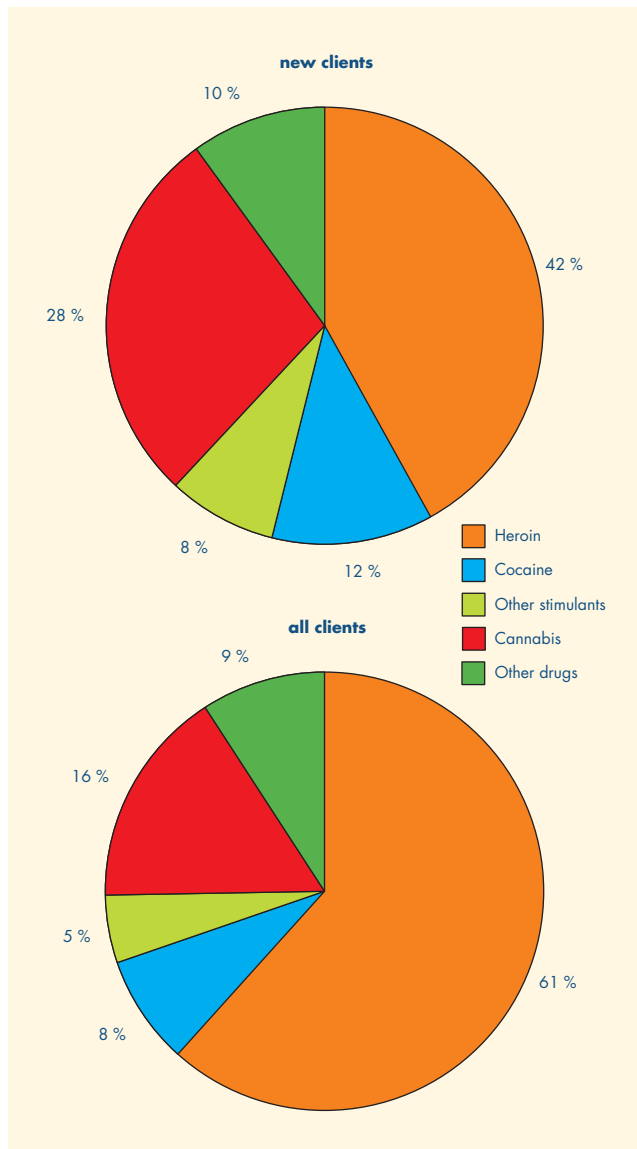
The enlargement of the EU has embraced a greater variety of social behaviours, with illicit drug use no exception. Developments within the drug culture, the rise of synthetic drugs and illicitly used medicines, the shift towards cocaine and the general high prevalence of cannabis use all have to be acknowledged in the understanding of what constitutes the needs of those with problems associated with their use of drugs. It can be noted from earlier sections of this report that, although heroin users still clearly predominate in demands to the drug treatment services, the picture is changing with respect to those who are entering treatment for the first time, among whom reported cannabis and stimulant problems have been increasing (Figure 14).

This changing position must be seen against the background of greatly expanded treatment provision for those with opioid-related problems as well as increased reporting coverage of treatment services. Opioid substitution treatment in particular, locking people into long-term continuous care (note that this is not shown in these diagrams, which show only those entering treatment in the current year), emphasises the role of opioids in current treatment burden as compared with new treatment entrants. Nonetheless, in many countries it appears that those developing a drug problem today in Europe are likely to be, in terms of the substances they are using at least, more heterogeneous than has historically been the case.

## The PDU indicator and counting hidden populations of drug users

The current PDU approach has proved extremely valuable in getting better estimates of the important group of drug users who represent the major consumers of drug treatment services in Europe. This approach has served to stimulate the development of a range of methods and statistical procedures to estimate the full size of this largely hidden population. In

**Figure 14:** Distribution of 'new' and 'all' clients requesting treatment according to their primary drug



NB: Based on data from the Czech Republic, Denmark, Germany, Greece, Italy, Cyprus, Hungary, Malta, the Netherlands, Slovenia, Slovakia, Finland, Sweden, the United Kingdom, Bulgaria, Romania and Turkey.  
Sources: Reitox national focal points.

all these approaches measurement is grounded in the idea that a percentage of problem drug users are 'administratively visible' as they are in contact with a range of treatment, legal and emergency, and social services, and from this visible minority the size of the population can be estimated if the percentage is known. These kinds of indirect statistical methods complement population survey work, which, for a range of methodological and practical reasons, is less suitable for estimating the prevalence of drug use that is of low prevalence, stigmatised and largely hidden.

In terms of the current implementation of the PDU indicator across the EU, countries have adapted the definition to cover the practicalities of their local situation and the position is therefore heterogeneous. Nine countries essentially follow the EMCDDA definition as it stands, 11 countries estimate only the number of opioid (or heroin) users and a further four countries do not exclude problem cannabis users although cannabis users in general form only a very small part of their estimates (criteria for including cannabis users being quite strict in terms of counting only dependent or very intensive use).

The more widespread use of cocaine, crack cocaine and stimulants in general, along with the overlap of drug problems with problems associated with alcohol and prescribed medicines, implies that even within a consistent implementation of the indicator the estimates would now cover an increased variety of drug-taking repertoires than before, with the possibility of more varied consequences and problems. In addition to monitoring the overall extent of problem drug use, there is therefore a need to monitor separately the different behaviours that make up the PDU indicator, i.e. injecting and each drug type within the PDU definition. This may be particularly important in the light of evidence from some countries of increasing use of cocaine and the patterns of amphetamine use, as well as allowing detailed tracking of trends in opioid use. If all these behaviours are reported only in total, there is clearly a potential for masking important developments and a lost opportunity for a better understanding of trends.

Earlier in this report a separate estimate of heroin use and injecting in Europe was provided for the first time. In addition, we note the increase in treatment availability for opioid problems, with estimates of over half a million opioid substitution treatments in Europe. This suggests that the proportion of heroin users and injectors having or having had contact with treatment services may be quite large in many countries. The EMCDDA is currently exploring with its national technical groups what value can be added by bringing together information on treatment demand, treatment availability, and estimates of heroin use and injecting drug use.

### Moving beyond the PDU indicator

A further step in developing our ability to understand better the European drug problem is to explore the extent to which intensive drug use can be incorporated into the monitoring exercise, beyond PDU monitoring. The extent to which intensive drug use, however it is defined, is associated with dependence and levels and types of problems requires further elaboration, and, for example, Kandel and Davis (1992) estimated that in the USA around one third of daily

cannabis users could be considered to be dependent. The way forward in this area requires the formalising of the concept of frequent, intensive use of cannabis and other illicit drugs as a specific target for monitoring. Frequent or intensive use can be measured in survey data to complement its estimation through indirect statistical methods. Currently, survey data provide a useful window on different patterns of cannabis use, but these are largely restricted behavioural and frequency of use measures. Survey data are likely to be important if we are to develop robust estimates of the number of users of drugs such as cannabis who could be described as dependent or harmful users, at least by self-report.

This move to defining frequent, intensive use more formally for a range of drugs would also assist the development of research tools to assess levels of problems and dependence related to different levels and patterns of cannabis consumption. A number of European countries are working on developing methodological tools for measuring both intensive use and levels of dependence and problems, and the EMCDDA is promoting collaboration in this area of work.

A complication of identifying intensive use as an indicator of those who are likely to be most at risk of becoming dependent or experiencing problems is that the notion of what constitutes intensive use is to some extent drug specific. Although problem opioid use is strongly characterised by daily patterns of use, this is often not the case for stimulant drugs. With these drugs, binge consumption is often more common, use escalating for short periods and then decreasing, often with the users switching to other drugs or alcohol to alleviate the adverse consequences of abstaining. Both pharmacological and contextual factors may be important in influencing patterns of intensive drug use, but it is clear that behavioural measures of intensive use will need to be sensitive to different patterns of drug use associated with different types of drug.

### **The challenge of reporting polydrug use problems**

For good practical and methodological reasons most reporting on drug use describes each substance separately. This provides the conceptual clarity necessary to facilitate reporting based on the behavioural measures available, but it ignores the fact that individual drug users will often have consumed or be consuming a range of both illicit and licit substances and these users may also be experiencing problems with more than one drug. They may substitute one drug type for another or may change their drug of choice over time or may use them complementarily. This kind of complexity is extremely challenging to a monitoring system even if analysis is restricted to simple behavioural measures of drug consumption in different time periods. If concepts

of problematic and dependent use are included, these complexities increase further and very few robust data exist at a European level to permit informed analysis. Nonetheless, it is likely that some countries have a sizeable population of chronic problem drug users, who are difficult to classify by primary substance and who may be experiencing problems due to their use of both licit and illicit substances. Addressing this problem requires developing a better understanding of the patterns of polydrug use and applying this to improve national and European-level reporting.

### **Poly-substitution**

Within the general concept of multiple drug use, several specific meanings of the term must be considered. At one extreme, there is the use of several substances in an intensive and chaotic way, simultaneously or consecutively, in many cases each drug substituting for another according to availability. For instance, this is the case with problem users who use different opioids, as well as pharmaceuticals, cocaine, amphetamines and alcohol.

This pattern of use seems to exist among some chronic users, possibly among marginalised groups, possibly among people with psychiatric conditions. In many recording systems in Europe, these cases will be attributed to opioids.

As such, these individuals will fall within the definition and monitoring of problem drug users. However, there remains a further question of whether this intensive, chaotic polydrug use is enough of an entity in itself — a drug non-specific addiction therefore requiring targeted epidemiological measurements and treatment, support or harm reduction in a particularly difficult situation. Under these circumstances, any monitoring of the component parts of problem drug use would need to include polydrug use as one of these separately measured components.

### **Drug combinations**

There is a second group of users who take several substances in a systematic way simultaneously, wanting the effects of the pharmacological combination, for instance speedballing — the simultaneous use of heroin and cocaine by injection.

A second drug with a functional or pharmacological rationale is not confined to simultaneous use but may also be used consecutively, as a replacement or as a complementary drug. For example, benzodiazepine can be used to reduce withdrawal symptoms when opioids are not available. In other cases, a second drug may be used for its compensating pharmacological effect: this is the case when the narcotic effect of opioids is modified by using cocaine, or when the anxiety effect of cocaine or amphetamines is placated by the use of opioids or other depressants.

### Increased risks through polydrug use

The potentiating effect of one drug on another is sometimes considerable, and here the licit drugs and medicines — such as alcohol, nicotine and antidepressants — have to be considered in conjunction with the controlled psychoactive substances. The risk level will depend on the dosage level of both substances. Concerns exist about a number of pharmacological pairings: alcohol and cocaine increase cardiovascular toxicity; alcohol or depressant drugs, when taken with opioids, lead to an increased risk of overdose; and opioids or cocaine taken with ecstasy or amphetamines also result in additional acute toxicity.

### Limits of the data available on polydrug use

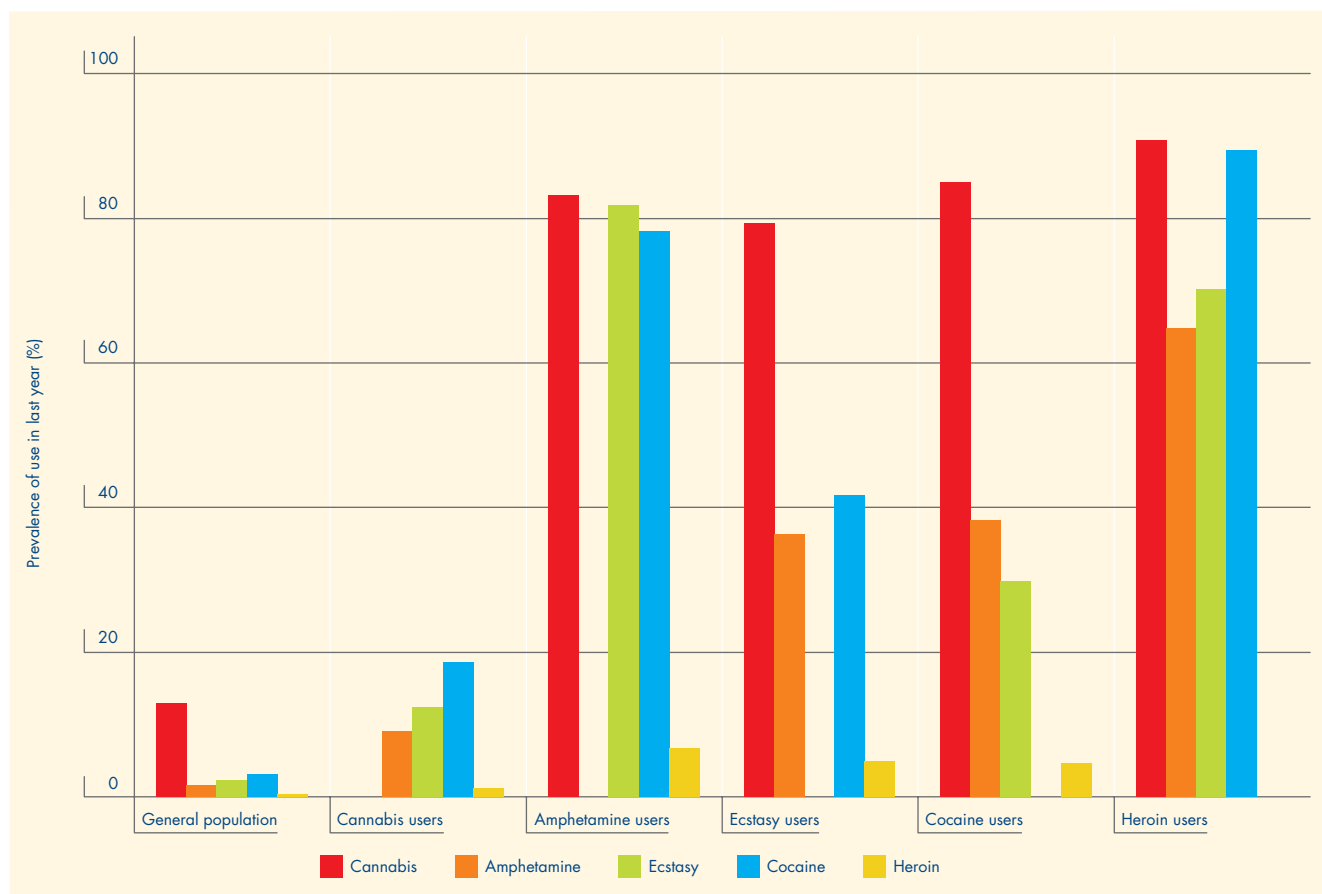
The absence of available data limits reporting on many aspects of polydrug use. Data are available from toxicological reports from drug overdoses and self-reports from those attending treatment services. While these sources allow some insights into polydrug use, the information available is often limited and the representativeness of the data needs to be considered.

Survey results do show considerable use of more than two drugs by individuals in the same time period. However, survey data often poorly report on some forms of drug use and, even where there are data, work needs to be done to develop comparable reporting standards. An example of the extent of polydrug use data available from population surveys can be seen in a recent technical report of the EMCDDA (2005b). Taking the example of data from Spain, Figure 15 shows that use of one drug results in an increased tendency, compared to that of the general population, to have used another and that this varies according to the drug considered. For example, among heroin users, the use of cocaine is relatively common, but use of other drugs is less apparent for cocaine users.

### Developing an operational definition of polydrug use: a question of timing?

Consideration needs to be given to what time periods are selected for assessing and reporting on polydrug use. Lifetime prevalence rates are in general not likely to be very useful or relevant to public health issues compared with measures of more recent use.

**Figure 15:** Use of drugs in the last year by different user groups in the general population aged 15–34



NB: Data for Spain 1999. See Figure GPS-34 in the 2006 statistical bulletin for more information.  
Source: EMCDDA (2005b).



Polydrug use could be usefully defined operationally as the frequent use of more than one substance over a minimum specified time period, for example one month. This does not distinguish the various types of use described above, but gives an overall picture of what might be a high-risk group. The exception to discarding lifetime use in characterising polydrug behaviour is when dealing with the very young — pupils or students — in which case lifetime multiple use may more strongly reflect current use. The evidence, for example from ESPAD surveys, suggests that the more deviant/low-prevalence patterns of drug use among students (ecstasy, amphetamine, hallucinogens, cocaine, heroin) cluster among a few individuals.

## **Improving monitoring of the drug problem in Europe and improving the sensitivity to polydrug consumption**

Achieving a better understanding of the nature and scale of the European drug problem is one of the key tasks of the EMCDDA. Drug use is, however, a complicated issue encompassing a range of behaviours that are variably associated with several important public health and social problems. Drug users may be experiencing or be at risk of problems. Patterns of drug use vary from the experiential, episodic and occasional to the regular, intensive and uncontrolled. Drug users may be classified under clinical definitions of having a drug problem or being dependent, and in research terms both these categories can be elaborated into continuums. To add to this complexity, drug users often consume multiple substances and change

their consumption patterns over time. No single reporting instrument can adequately encompass this complexity. In practice, the multi-indicator approach adopted by the EMCDDA is intended to illuminate these different aspects of the drug phenomenon.

The PDU indicator, by focusing on a particular set of behaviours, provides a valuable window on some of the most detrimental and costly forms of drug use. As such, it is an important component in understanding the European drug problem as a whole. However, a clear need now exists to complement the PDU indicator's overall estimates with substance-specific component estimates in order to address Europe's increasingly heterogeneous drug problem.

Given that many of the data sources available are based on behavioural reports of drug consumption, the concept of frequent or intensive use needs to be developed on this basis. This will widen the perspective for monitoring drug problems beyond that currently found in the PDU indicator. Locating the PDU information alongside this broader information set will also represent a step forward in the EMCDDA's efforts to improve its overall understanding of both the scale and the nature of drug problems in Europe. In parallel, work needs to advance on developing reporting standards that enable patterns of polydrug use to be better described at the European level. The first steps in this direction include developing a more sophisticated conceptual framework for looking at different types of multiple drug consumption — including the adoption of appropriate temporal frameworks — and identifying appropriate data sources.





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The EMCDDA collects, analyses and disseminates objective, reliable and comparable information on drugs and drug addiction. In doing so, it provides its audiences with an evidence-based picture of the drug phenomenon at European level.

The Centre's publications are a prime source of information for a wide range of audiences including policymakers and their advisors; professionals and researchers working in the field of drugs; and, more broadly, the media and general public.

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