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for Drugs and Drug Addiction

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THE STATE OF THE DRUGS PROBLEM IN EUROPE



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Foreword

We are proud to present this, the thirteenth, annual report of the European Monitoring Centre for Drugs and Drug Addiction. This report is only possible through the hard work and dedication of our partners in the Reitox network of national focal points and the experts throughout Europe who have contributed to the analysis. We also are indebted to those EU agencies and international organisations working in the drugs field. Our report is a collective endeavour and we thank all those who have contributed to it. The rationale behind this work is that a cool-headed analysis of what we know about the drug situation is a condition for an informed, productive and reasoned debate. It ensures that opinions are enlightened by facts, and that those making difficult policy choices can have a clear understanding of the costs and benefits of the options available.

This year has been an exceptionally busy time for drug policy, and the EMCDDA has been honoured to have supported both the final evaluation of the current EU action plan on drugs and the review of the 1998 United Nations General Assembly Special Session on the drug problem. It is gratifying to note that, by international standards, Europe stands out as one of the parts of the world where monitoring capacities are most developed. Nonetheless, we are aware of the limitations of our current information resources, and are constantly working with our partners to improve the quality and relevance of the data available.

An underlying theme of the policy debate on drugs is the costs, both hidden and more visible, of Europe's drug problem. This issue is addressed in various parts of this report. The EMCDDA has been working to develop an understanding of the public expenditures associated with tackling drug use in EU Member States. This work is in its infancy, and estimates derived are indicative rather than precise. Nonetheless, they point to considerable sums being spent, with preliminary figures of between EUR 28 billion and EUR 40 billion. Less easy to express in economic terms is the harm caused by drug use. What costs do we count in looking at the tragic loss of life caused by drugs in Europe, the negative impact on communities where drugs are produced or sold, or in the way that drug trafficking undermines the social

development and political stability of producer and transit countries? One has only to consider the worrying developments resulting from the transiting of cocaine through West Africa to be reminded of the collateral damage that this problem can cause.

On a positive note, drug use in Europe appears to be stabilising, and progress can be noted in the way in which EU Member States are addressing this issue. For most forms of drug use, our overall assessment is that we are not seeing increases, and in some areas the trends appear to be downward. In terms of responses, we have seen virtually all Member States adopt a strategic approach, and greater cohesion is visible at the European level. Treatment availability continues to grow, and in some countries it has reached the point where the majority of heroin users, once considered a hidden population, are now in contact with services of one sort or another. Not many years ago, HIV infection among drug injectors was a central concern in the drug policy debate. Since then, a pragmatic mixture of prevention, treatment and harm-reduction measures has become the norm in Europe, and rates of new infection attributed to drug use have fallen and continue to do so.

Good news makes poor headlines and can be overlooked. However, it is important to recognise progress where it has been made. Increasingly, in Europe, we have an understanding of what measures can be effective in addressing drug problems. An acceptance that our activities can, and do, make a difference is a prerequisite to securing investment and policy support. This is not to say that our report does not highlight many areas of concern for the European Union. Examples include the continuing increases in cocaine use and the considerable differences that still exist between countries in the availability and quality of services for those with problems. We must therefore conclude that, even if progress has been made, the journey remains far from finished. However, today in Europe, more than at any time in the past, we have a stronger agreement on the direction we should take.

Marcel Reimen

Chairman, EMCDDA Management Board

Wolfgang Götz

Director, EMCDDA



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- the heads of the Reitox national focal points and their staff;
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- the European Centre for Disease Prevention and Control (ECDC), the European Medicines Agency (EMA) and Europol;
- the Pompidou Group of the Council of Europe, the United Nations Office on Drugs and Crime, the WHO Regional Office for Europe, Interpol, the World Customs Organisation, the ESPAD project and the Swedish Council for Information on Alcohol and other Drugs (CAN), and the European Centre for the Epidemiological Monitoring of AIDS (EuroHIV);
- the Translation Centre for the Bodies of the European Union and the Office for Official Publications of the European Communities.

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/about/partners/reitox-network>



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 2006 (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.

Retail prices of drugs reported to the EMCDDA reflect the price to the user. Reports on purity or potency, from most countries, are based on a sample of all drugs seized, and it is generally not possible to relate the reported data to a specific level of the drug market. For purity or potency and retail prices, all analyses are based on typical (modal) values or, in their absence, mean (or median) values.

Reports of the prevalence of drug use based on general population surveys mostly refer to the national population aged 15–64 years. Countries using different upper or lower age limits include: Bulgaria (18–60), the Czech Republic (18), Denmark (16), Germany (18), Hungary (18–59), Malta (18), Sweden (16) and the United Kingdom (16–59).

In reports on treatment demand, 'new clients' refers to those who have entered treatment for the first time in their lives and 'all clients' refers to all those entering treatment. Clients in continuous treatment at the start of the year in question are not included in the data. Where the proportion of treatment demands for a primary drug is given, the denominator is the number of cases for which the primary drug is known.

Analysis of trends is based only on those countries providing sufficient data to describe changes over the time period in question. Figures for 2005 may substitute for missing 2006 values in trend analysis of drug market data; for the analysis of other trends, missing data may be interpolated. Trends in price are adjusted for inflation at national level.

The term 'reports' for drug law offences may describe different concepts in different countries.

Further information on the data and analytical methods is available in the 2008 statistical bulletin.

The annual report is available for downloading in 23 languages (<http://www.emcdda.europa.eu/publications/annual-report/2008>).

The 2008 statistical bulletin (<http://www.emcdda.europa.eu/stats08>) presents the full set of source tables on which the statistical analysis in the annual report is based. It also provides further detail on the methodology used and about 100 additional statistical graphs.

Country overviews (<http://www.emcdda.europa.eu/publications/country-overviews>) provide a summary of key aspects of the drug situation for each country.

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



Commentary

The drug situation in Europe — new perspectives and some old realities

A strong voice from Europe in an important year for reflection and policy formation

In Europe, 2008 has seen the evaluation of the 2005–08 drug action plan, together with work to prepare a new plan to take forward the EU drug strategy during its second period (2009–12). At the same time, 13 Member States are redrafting or reviewing their national drug strategies or action plans. Internationally, this year also marks the 10-year review point of the declarations and action plans adopted at the 20th UN General Assembly Special Session (Ungass). This makes 2008 an unprecedented year for European and global reflections on how drug policies have performed to date, and what directions should be pursued in the future.

A growing European consensus can be seen in the way Member States have adopted national drug strategies and in their contribution to the global debate on drugs. All but one of the EU Member States now have national drug policy documents, and around half of them now structure their national policy documents along lines similar to those found in the EU action plan — an indication of a growing policy convergence in Europe on how the drug problem should be addressed. EU Member States, supported by the Commission, have put forward an increasingly united EU position in the ongoing discussions that have accompanied the Ungass review. In the European contributions to the debates, emphasis has been placed on the need for comprehensive, balanced and evidence-based policies and actions, and on the value of improved monitoring of the global drug problem in the post-Ungass period.

Drug use and the application of criminal sanctions: a mixed picture

In recent years, the EMCDDA has reported a tendency among European countries to make a stronger distinction in their drug laws between those who are trafficking or selling drugs and those using them. This distinction has been reflected in a reduction of penalties for drug use in some countries, though others have rejected moves to reduce penalties or have even increased them. In practice, making a distinction between the supplier and

the user is often difficult, and Member States vary greatly in how they have drawn the line between these two categories.

The idea that European countries are now making less use of criminal sanctions for drug use is not borne out by the available data. During the past five years, the number of reported drug law offences has increased in Europe. Most of the reported drug law offences are related to use and possession for use rather than supply, and whereas offences related to supply have increased by 12 %, those related to possession have increased by over 50 %. Cannabis continues to be the drug most often associated with drug law offences.

The reasons for the increase in the number of drug law offences related to drug use are unclear, and could even be related to the possibility that, in some countries, it may have become administratively simpler to issue a conviction for possession. However, the view held by some that, for drug users and particularly cannabis users, the likelihood of being charged with drug offences has decreased in recent years is not supported by the data. Furthermore, the extent to which sanctions applied for drug possession have changed is not clear, and the EMCDDA will explore this question in a selected issue next year.

New survey explores young people's attitudes to drug use

A recent Eurobarometer survey explored young people's attitudes and perceptions on drugs and found considerable consensus among countries. Overall, the risks associated with using drugs such as heroin, cocaine and ecstasy were rated as high by between 81 % and 96 % of those surveyed. The vast majority of respondents (95 %) felt that these drugs should continue to be controlled in Europe. Views on cannabis, however, were more divided, with 40 % feeling that the drug posed a high risk, while about the same number (43 %) considered that cannabis use represented a 'medium health risk', broadly similar to the risks associated with smoking tobacco. The perceptions of health risks associated with cannabis use were reflected in the lower level of support for continuing the ban on cannabis

(67%) and the view held by a substantial minority (31%) that cannabis should be regulated in a similar way to alcohol and tobacco products.

Drug use prevention: evidence base grows but practice is slow to change

Despite the almost universal support for drug use prevention, formal evaluations in this area are methodologically challenging and, historically, the evidence available for demonstrating the effectiveness of interventions in this area has been limited. This situation is changing as the scientific basis for drug prevention continues to grow and more rigorous studies are carried out. Although inference must still often be drawn from the results of US studies, whose relevance to the European context may be questionable, there is now a growing body of European work. Together, the information now available allows for a greater understanding of what types of activities are likely to prove effective and how to target those most at risk. Nevertheless, new data suggests that in many countries, the predominant approaches are often still those that lack a strong evidence base and, in some cases, include activities that may even be counterproductive. The challenge for policymakers may be that those programmes that are known to deliver benefits often require both a greater investment of resources and more attention to training and quality control.

To support knowledge transfer and best practice in the drugs field, in 2008 the EMCDDA launched an internet portal on best practice. The portal, which includes a prevention module, provides an overview of the latest evidence on programme efficacy and effectiveness as well as tools and standards aimed at improving the quality of interventions. Examples of evaluated practices across Europe are also provided.

Drug treatment: more emphasis on outcomes and client needs

The number of drug users receiving treatment for their dependency has grown considerably in recent years, and many countries now have a significant proportion of their problem opioid users in long-term substitution treatment. This trend has led to a widening of the available pharmaceutical options and has resulted in an increased focus on treatment quality and outcome, as opposed to treatment uptake, as a primary policy concern. In particular, the debate has moved on to discussions about what constitutes realistic long-term goals for substitution treatment and to what extent clients may be socially reintegrated and return to a normal lifestyle. Taking

up employment is one of the key elements of achieving reintegration into society, and it has been shown to be of high prognostic value. However, re-entry into the labour market is often difficult to achieve given the poor skills and low educational status that characterise many of those found among an overall ageing population of chronic drug users in long-term treatment in Europe. Arriving at a consensus on what constitutes successful outcomes for those with long-term drug problems and as to what extent members of this population can be successfully reintegrated back into society are becoming increasingly important questions for European drug treatment services.

Although Europe continues to see an expansion of drug treatment provision, considerable variation still exists between countries in the availability of care or the extent to which services address different types of drug problems. Moreover, widespread recognition of the value of providing drug treatment options to users in prison has yet to be matched by investments in services in this area, which in most countries remain poorly developed. An important challenge for drug treatment services in Europe is the need to develop models of care tailored to the needs of a more heterogeneous population of drug users. Against the general background where evidence does not point to a single best approach, some European countries are developing interesting new methods to treat cannabis or cocaine users. The complex problems caused by different patterns of polydrug use, including alcohol, constitute a challenge for service development. It is therefore likely that European drug treatment services will have to develop an increasingly differentiated set of responses in the future if they are to match the increasingly differentiated needs of their clients.

Stronger signals that the popularity of cannabis use may be declining

Recent data from school and adult population surveys suggest that overall cannabis use has stabilised or is declining in some countries. Different national trends are still apparent and marked differences exist between countries. This is reflected in the medium-term trends, which have seen increases reported often by lower prevalence countries, a stable situation for many others and declines noted among some higher prevalence countries.

Declines in prevalence are most apparent among younger age groups. New school survey data from the latest HBSC (Health behaviour in school-aged children) study reveal a stable or decreasing trend in drug use among 15-year-old students in most countries during the 2001–2006 period and preliminary reports suggest that this picture may be

At a glance — estimates of drug use in Europe

The estimates presented here relate to the adult population (15–64 years old) and are based on the most recent data available. For the complete set of data and information on the methodology see the accompanying statistical bulletin.

Cannabis

Lifetime prevalence: at least 71 million
(22 % of European adults)

Last year use: about 23 million European adults or one-third of lifetime users

Last month use: over 12 million Europeans

Country variation in last year use:
overall range 0.8 % to 11.2 %

Cocaine

Lifetime prevalence: at least 12 million
(3.6 % of European adults)

Last year use: 4 million European adults or one-third of lifetime users

Last month use: around 2 million

Country variation in last year use:
overall range 0.1 % to 3.0 %

Ecstasy

Lifetime prevalence: about 9.5 million
(2.8 % of European adults)

Last year use: over 2.6 million or one-third of lifetime users

Last month use: more than 1 million

Country variation in last year use:
overall range 0.2 % to 3.5 %

Amphetamines

Lifetime prevalence: almost 11 million
(3.3 % of European adults)

Last year use: around 2 million or one-fifth of lifetime users

Last month use: less than 1 million

Country variation in last year use:
overall range 0.0 % to 1.3 %

Opioids

Problem opioid use: between one and six cases per 1 000 adult population

In 2005–06, drug-induced deaths accounted for 3.5 % of all deaths of Europeans 15–39 years old, with opioids being found in around 70 % of them

Principal drug in around 50 % of all drug treatment requests

More than 600 000 opioid users received substitution treatment in 2006

confirmed by the latest round of ESPAD (European school project on alcohol and other drugs), which is due to be published at the end of 2008. In the United Kingdom, a country that used to stand out in terms of its high prevalence of cannabis use, a steady downward trend is

now visible, and is most evident in the 16–24 age group. The reasons why cannabis use might be becoming less popular among young people are not well-documented, though they may be related to possible changes in the perceptions of the risks associated with the use of this drug. Some commentators have suggested that declines in the popularity of cannabis use may be associated with changing attitudes to cigarette smoking. Cannabis in Europe is often smoked in combination with tobacco, and drug prevention programmes increasingly address together the health implications of using both illegal and legal substances.

Despite recent trends, levels of cannabis use in Europe remain high by historical standards, and considerable numbers of regular and intensive users, mostly young males, exist in many countries. Trends in the numbers of regular and intensive users of cannabis may move independently of the prevalence of use of the drug among the general population, and more focus on these patterns of use and associated problems is required.

Domestic cannabis production: the big unknown

Cannabis resin has historically been the dominant product in many EU Member States, and western Europe remains overall the major global consumer of this form of the drug. However, and to a large extent undetected, domestic production of herbal cannabis has been increasing in Europe. Most countries now report local production, which can range from a few plants grown for personal consumption to large-scale plantations grown for commercial purposes.

The extent and relative market share of domestically produced herbal cannabis remains unknown, and in response to this the EMCDDA is carrying out a study on mapping the cannabis market in Europe. There is also a growing debate about the implications of the evolving cannabis market. Concerns being voiced include the negative impact of cannabis production sites on local communities through increased levels of criminality, and that domestically produced cannabis is typically of high potency. Local production also poses a challenge for law enforcement bodies, as production sites are located close to the consumer, relatively easy to conceal and do not necessitate the transportation of drugs across national borders.

Cocaine use still growing in a segmented European market for stimulant drugs

Stimulant drugs play an important role not only in patterns of drug use found among the chronic and marginalised

population of problem drug users in Europe, but also among the better socially integrated groups of young people who use drugs on a more recreational basis. However, patterns of stimulant use differ across Europe: cocaine is now the most commonly used stimulant in many countries in the south and west of Europe, and its use continues to grow. In contrast, the indicators for amphetamine and ecstasy use suggest an overall stable or declining picture. Nonetheless, amphetamines remain the most used stimulants in most countries in central, northern and eastern Europe, where in some cases they represent an important part of the drug problem. Methamphetamine use remains rare outside the Czech Republic and Slovakia, although the availability or use of the drug is sporadically reported by other countries.

As similarities exist in both the settings in which different stimulant drugs are used and in the rationales offered for their use, to some extent these substances can be regarded as competing products on the European drug market. This would imply that, as well as targeting individual substances, interventions need to consider stimulant drugs as a group rather than only as individual problems. This point is important, as measures to impact on the availability of one of these substances may be undermined if they simply result in consumers switching to alternative products.

Developments in synthetic drug production in Europe increases concerns about environmental costs

European countries remain major producers of amphetamines and MDMA, although the relative importance of Europe may have declined as production has increased elsewhere. Typically, between 70 and 90 production units are detected each year, mainly concentrated in a few countries in western and eastern Europe. Law enforcement data suggest that the production of synthetic drugs, including methamphetamine, may be becoming more sophisticated, with production runs increasing in scale through the use of larger reaction vessels, industrial and custom-made equipment and mobile units.

The increase in the size of typical production runs may be exacerbating the problem of waste dumping. Typically, the production of one kilogram of amphetamine or MDMA results in around 15–20 kilograms of waste material, including toxic and inflammable chemicals which constitute an environmental hazard. The costs in terms of environmental damage and clearing up of sites that have been used for the illegal disposal of chemical

wastes resulting from synthetic drug production can be considerable.

Cocaine trafficking through west Africa: an area of concern and action

As cocaine use continues to rise in Europe, increased efforts are being focused on cocaine interdiction. Both the volume and number of cocaine seizures continue to increase, with annual seizures now in excess of 120 tonnes, of which more than three quarters are accounted for by Spain and Portugal. Efforts to counter the trafficking in cocaine into Europe have been bolstered by the establishment, in Lisbon, of the Maritime Analysis and Operations Centre–Narcotics (MAOC-N), which is playing an important role in the coordination of interdiction activities and the sharing of intelligence among participating Member States.

Although cocaine enters Europe by a number of routes, trafficking through west African countries has dramatically increased and now represents a major route for cocaine destined to the European market. This situation has the potential to destabilise and undermine development efforts in a region already facing many social, health and political challenges. In particular, the income generated by cocaine trafficking has considerable potential to undermine criminal justice systems and encourage corruption. The European Union and its Member States are working together with west African countries to develop a range of measures to address this growing threat.

Heroin problems not diminishing alongside reports of increased use of synthetic opioids

The most recent estimates show that, at an estimated 733 tonnes, potential global heroin production has continued to increase. However, the impact of this increase on the availability and use of this drug in Europe is difficult to gauge. The available data make drawing conclusions in this area difficult. For example, the quantity of heroin seized in the European Union has declined slightly, but this has been counterbalanced by considerable increases in Turkey.

No strong evidence exists to suggest an epidemic growth in heroin problems similar to the one many parts of Europe experienced in 1990s; overall, the data point to a stable but no longer a diminishing problem. As such, heroin use in Europe remains a serious public health issue and still accounts for a large proportion of the overall health and social costs associated with drug use. Data suggest that opioid use, mostly heroin, accounts for around 60% of those in drug treatment in Europe. Among those new to treatment,

the relative proportion of opioid users — but not their actual numbers — had been falling, but this trend now appears to have levelled out. And, although there is evidence that Europe's opioid-using population is slowly ageing, the data suggest that new recruitment is still occurring at a rate that will ensure that the extent of the problem will not significantly decline in the foreseeable future.

Perhaps counter-intuitively, given the situation in Afghanistan, problems with both diverted and illicitly produced synthetic opioids appear to be increasingly common in some countries. In Latvia, Lithuania and Estonia, for example, there are indications of a growing problem caused by the availability of 3-methylfentanyl that is illicitly manufactured outside the EU. Due to its strength (fentanyl is considerably more potent than heroin), using this drug can be extremely dangerous, as reflected in over 70 fentanyl-related fatal poisonings reported in Estonia in 2006. Other countries note a growing number of individuals seeking help with problems related to the use of opioids that appear to have been diverted from therapeutic purposes, and this contributes to the growing polydrug use problem that now characterises chronic drug use in parts of Europe.

Drug injecting and HIV: overall picture positive but important national differences

Over 40% of all heroin users entering outpatient treatment report injecting, underlining that this particularly harmful route of administration remains an important health issue in Europe. Injecting is associated with a range of problems including, but not limited to, the spread of blood-borne infections including HIV and hepatitis C. Changes in the proportion of injectors among those entering treatment suggest that, in many countries, the overall trend has been away from injecting, although distinct regional and national differences can be seen in the data. In some countries, particularly in eastern Europe, drug injection remains the principal route of heroin administration and is reported by over 80% of heroin users entering treatment. Relatively high levels of initiation also appear to be still occurring in some Member States, as indicated by studies among injecting drug users that show a relatively high proportion of young and new injectors.

Overall, the rate of newly acquired HIV infections in Europe has been falling since a localised epidemic in some countries caused a peak at the beginning of this decade. Declines in injecting together with the increasing availability of treatment and harm-reduction services appear to have resulted in a generally improving situation; and where some increases in new infection are

observed, these have been small. However, there remain important differences between countries. Although data point to an improving situation in Estonia, Latvia and Portugal, these countries still report disproportionately high rates of new infection and account for a significant proportion of all new HIV cases in Europe attributed to drug use. Data from regional or local studies also suggest that transmission of HIV infection remains an issue in Spain and Italy, although the absence of national case reporting data makes tracking trends in these countries difficult. Elsewhere, risk behaviour continues and the potential for new epidemics remains, strongly suggesting the need to remain vigilant: for example, Bulgaria reported 34 new cases in 2006, but was reporting virtually no infections in the years 2000–03.

Drug-related deaths: a major burden on public health

The EMCDDA monitors fatal poisonings directly attributable to drug use (drug-induced deaths). There are, on average, around 7 000–8 000 drug-induced deaths reported in Europe each year, and due to known underreporting this figure represents a minimum estimate. Opioids, principally heroin, are the drugs most often associated with overdose, although other drugs and alcohol are commonly present. After falling for some years in the early part of this decade, the trend in drug-induced deaths has now levelled out. The reasons for this are unclear, indicating a need for more research on both the factors associated with overdose and on the effectiveness of prevention measures. Drug users leaving prison may be at particular risk, with a recent study reporting mortality rates eight to ten times higher than expected. Overall, overdose prevention remains an area requiring increased investment.

Studies have also shown that overall mortality, when diseases, accidents and violence are also taken into consideration, among drug users is up to fifty times higher than that found among the general population. Therefore, investment in well-designed cohort studies is needed to provide a better understanding of the causes and extent of overall drug-related mortality and to examine differential risks such as those experienced by prisoners on release and treatment drop-outs.

Internet and market innovation pose challenges to drug policy

A recent EMCDDA survey has shown that more than 200 natural, semi-synthetic and synthetic psychoactive products are sold by online shops in Europe. Many of the substances are categorised as 'legal highs' or 'herbal highs' and advertised as alternatives to controlled

substances, although their actual legal status may vary considerably across Europe. Reports suggest that the number of online retailers of these products is growing and that they adapt rapidly to attempts to control the market, for example through the launch of new products. In addition, online pharmacies and online retailers selling psychoactive substances for ostensibly legitimate purposes also potentially provide new avenues for illicit drug supply. Taken together, Internet sales now represent a considerable challenge to both international and national drug policies and control mechanisms. Given the speed at which new products can appear and be distributed, the monitoring of online activities is becoming an important area for development.

Growing recognition of the importance of dialogue with civil society

Drug problems are intertwined with a range of other social and health issues. Consequently, successful interventions in this area require the involvement of a broad alliance of participants and can benefit from the support of the communities in which they are implemented. This understanding is reflected in a growing recognition that the policy debate needs to be informed by a dialogue with civil society. With this aim in mind, several actions have recently been taken within the European discourse on drugs. Among the most notable of these is the establishment by the European Commission of a civil society forum, which provides an opportunity to ensure that

frontline experiences are fed into the process leading to the new EU drug strategy and inform the evaluation of the EU action plan on drugs. The importance of consulting with representatives of non-governmental organisations and local communities has also been recognised in the EU drug strategy and echoed in a report adopted by the European Parliament in March 2008 acknowledging the fundamental role of civil society in the development, implementation, evaluation and monitoring of drug policies.

European drug research and the need for transnational cooperation

Over the last decade, drug-related research and the infrastructure that supports it (research centres, scientific journals, funding mechanisms) has developed greatly in Europe, as shown in a selected issue on research published by the EMCDDA in 2008. Less positively, this progress has not been accompanied by a comparable increase in the cooperation and coordination of drug-related research efforts among EU Member States. Increasing attention is being paid to this issue, and the European Commission has commissioned a new study to provide an inventory of research activity together with a comparative analysis of infrastructures available in Europe and in other regions of the world. The report will include recommendations on how to improve cooperation at EU level and contribute to a discussion on how to improve the links between European research funding opportunities and needs of research and policy.



Chapter 1

Policies and laws

Introduction

Drug policy is set to be an important issue in 2008. In this year, both the United Nations and the European Union assess the results of their drug policies on the use of, and harms caused by, illicit drugs. The United Nations reviews the progress made in implementing the measures and reaching the goals decided during the 1998 UN General Assembly Special Session (Ungass) on the world drug problem. In Europe, 2008 sees the final evaluation of the current EU action plan on drugs (2005–08) and the drafting of the action plan for 2009–12. Furthermore, an unprecedented number of EU Member States also review their national drug strategies and action plans and draft new drug-policy documents ⁽¹⁾ during this year.

The EMCDDA will discuss the findings and developments made during 2008 in its next annual report. This year, Chapter 1 focuses on recent changes in drug policy, presents new data on drug-related public expenditure, explores three specific dimensions of drug laws — possession for personal use, alternatives to punishment, and the focus on protecting the public — and highlights the latest trends in drug-related offences. The chapter ends with an overview of drug-related research in EU Member States.

International and EU policy developments

Ungass 10-year review

In June 1998, the 20th UN General Assembly Special Session (Ungass) convened in New York to debate the world drug problem. This ‘drug summit’ set a new agenda for the international community through the adoption of three key documents ⁽²⁾: a political declaration; a declaration on the guiding principles of drug demand reduction; and a five-part resolution with measures to enhance international cooperation. In adopting the political declaration, UN Member States committed

themselves to achieving measurable results in reducing the supply and demand for illicit drugs by 2008.

This year’s session of the United Nations Commission on Narcotic Drugs (CND) has launched the 10-year review of the progress made in reaching the goals and targets set during the 1998 Ungass. A report presented by the United Nations Office on Drugs and Crime (UNODC) argued that significant progress has been achieved in the last 10 years, though, in some areas and regions, UN Member States have not fully attained the goals and targets mentioned in the political declaration ⁽³⁾. This assessment is to be followed by a one-year reflection period, during which discussions will first be held among intergovernmental expert working groups and then in intersessional meetings. This will allow preparations to be made for a dedicated two-day, high-level, segment at the 2009 CND, which will decide upon a possible future political declaration and measures.

The European Union is playing an active role in the Ungass review. Resolutions prepared by the EU were adopted at the 2006 (49/1), 2007 (50/12) and 2008 (51/4) sessions of the CND, all of which call for a scientific and transparent review process. The EMCDDA has also been involved in expert consultations funded by the European Commission and held by the UNODC, and in this context has provided an overview of drug strategies and responses in Europe since 1998.

Evaluation of the EU action plan on drugs

In December 2007, the European Commission presented its second progress review on the implementation of the EU action plan on drugs (2005–08). The report, which includes data from the EU Member States, the EMCDDA, Europol and the European Commission, assesses the extent to which the measures planned for 2007 were carried out. One of the main conclusions of the review was that there are signs of convergence between Member States’ drug policies. It also highlighted difficulties in collecting data

⁽¹⁾ The term ‘national drug-policy document’ means any official document approved by a government that defines general principles and specific interventions or objectives in the field of drugs, where officially represented as a drug strategy, action plan, programme or other policy document.

⁽²⁾ <http://www.un.org/ga/20special/>

⁽³⁾ <http://www.unodc.org/unodc/en/commissions/CND/session/51.html>

on supply-reduction activities and in linking some of the planned actions with the indicator chosen to assess their implementation.

The final evaluation of the current EU action plan on drugs took place in 2008, with input from the EU Member States, Europol and the EMCDDA. The evaluation report is due to be published by the Commission in autumn 2008, and its findings will contribute to the shaping of the second action plan (2009–12) under the current EU strategy on drugs (2005–12).

Other EU developments

In September 2007, the Council and the European Parliament adopted the 'Drug prevention and information' programme ⁽⁴⁾ under the financial framework 2007–13 and the general programme for civil justice and fundamental rights. The general objectives of the programme are: the prevention and reduction of drug use, dependence and drug-related harm; to contribute to the improvement of information on drug use; and to support actions taken under the EU drug strategy (2005–12). Under the programme, EUR 21.35 million will be available for Commission studies, operational costs of European non-governmental organisations in the drugs field, and transnational projects. Joint actions may also be undertaken with other Community programmes, for example the second programme of Community action in the field of health (2008–13) ⁽⁵⁾, which, in the part related to health promotion dealing with different health determinants, includes actions on illicit drugs in specific settings, such as schools and workplaces.

In June 2006, the European Commission issued a Green Paper on the role of civil society in drug policy, as called for in the current drug action plan. This was followed in 2007 by the selection process for a new civil society forum on drugs. The purpose of the forum is to serve as a platform for the informal exchange of views and information between the Commission and civil society organisations in the EU, candidate countries and, as appropriate, European neighbourhood policy countries. The forum includes 26 organisations representing a wide spectrum of views. It met for the first time in December 2007 and again in May 2008 to discuss the evaluation of the current EU action plan on drugs and the new action plan.

National drug strategies

New developments

New drug action plans or programmes were adopted by four EU Member States (Czech Republic, Estonia, Hungary, Finland), Turkey and Norway in the second half of 2007. All of these documents cover a time span of three to four years and, with the exception of the Turkish action plan, they have been preceded by previous plans or programmes. In the same year, Spain also adopted a complementary national action programme against cocaine (2007–10).

In early 2008, three more Member States adopted new policy documents. Italy's first drug action plan has a time frame of one year, and is to be followed by a four-year action plan (2009–12), which will be synchronised with the new EU action plan on drugs. Malta's first ever national drug-policy document, while not defining the time frame, includes almost 50 actions to be implemented in the coming years. Finally, the United Kingdom's new 10-year drug strategy (2008–18) is, for the first time, complemented by a three-year action plan (2008–11), which defines key actions to be implemented in the near future.

The majority of national drug-policy documents adopted in late 2007 and early 2008 focus mainly on illicit drugs, with some also addressing other substances such as alcohol, tobacco, medicines and performance-enhancing drugs. This reflects a tendency among European countries, whereby the existence of links and similarities between the use of illicit and licit substances is acknowledged, but drug-policy documents rarely comprehensively address substances other than illicit drugs ⁽⁶⁾. Norway continues to be one of the exceptions to this pattern, with illicit drugs and alcohol fully integrated in its recently adopted action plan. The numerous national drug strategies and action plans to be developed for 2009, together with those recently adopted, will allow the EMCDDA to examine whether the trend towards increasing integration of licit and illicit drugs in national drug policies, identified in the 2006 selected issue, has continued.

General situation

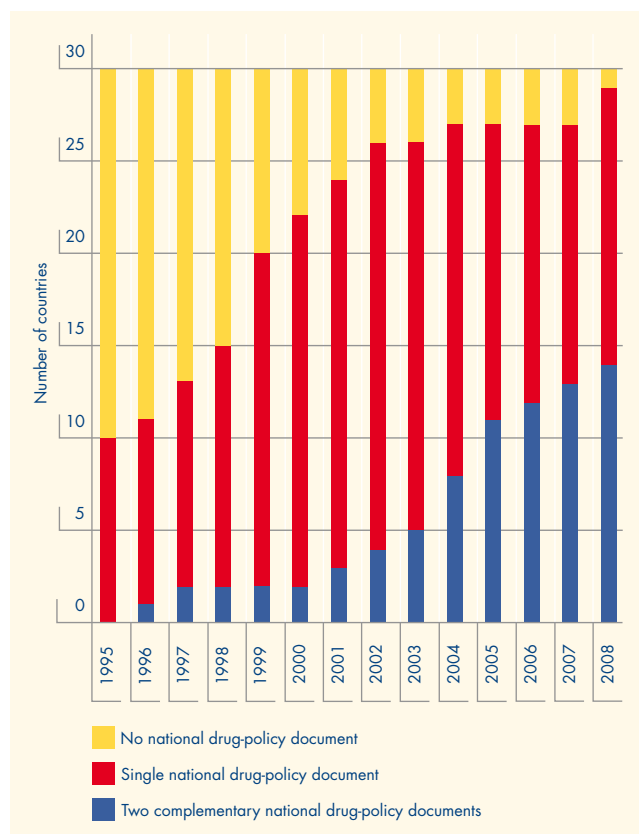
Austria is now the only EU Member State that has not adopted a national drug strategy or action plan, though each of its provinces has a regional drug or addiction strategy or action plan. In the other 26 Member States, as well as in Croatia, Turkey and Norway, drug policy is

⁽⁴⁾ Decision No 1150/2007/EC of the European Parliament and of the Council of 25 September 2007 establishing for the period 2007–13 the specific programme 'drug prevention and information' as part of the general programme 'Fundamental rights and justice' [OJ L 257, 3.10.2007, p. 23].

⁽⁵⁾ Decision No 1350/2007/EC of the European Parliament and of the Council of 23 October 2007 establishing a second programme of Community action in the field of health (2008–13) [OJ L 301, 20.11.2007, p. 3].

⁽⁶⁾ See the 2006 selected issue *European drug policies: extended beyond illicit drugs?*

Figure 1: Trend in the number of countries with national drug-policy documents among the 27 EU Member States, Croatia, Turkey and Norway



Sources: Reitox national focal points.

set out in national drug-policy documents. As a point of comparison, in 1995, only 10 of these 30 countries had developed such an instrument (Figure 1).

Convergence can also be seen in the format of drug strategies and action plans. Fourteen countries now structure their national drug-policy documents along lines similar to those of the current EU drug strategy and action plan. Moreover, the same number of countries now organise their national drug policies using two complementary instruments: a strategic framework and an action plan (Figure 1). In 2000, when the European Union used this approach for the first time, only two Member States had two complementary drug-policy documents.

The content of national drug-policy documents is another area in which there are signs of convergence among the EU Member States, Croatia, Turkey and Norway, with gradually more evidence of common objectives and common interventions in the national drug strategies and action plans adopted by different countries. However, as European countries differ in their drug problem as well

as in their political, social and economic contexts, the diversity that exists among national drug policies, though diminishing, is likely to remain to some degree in the future. Some examples of this diversity are highlighted in Chapter 2.

Evaluation

In 2008, 13 EU Member States have already redrafted or are due to review and redraft their national drug-policy documents, making this a year of unprecedented activity in policymaking at national level. Following Italy, Malta and the United Kingdom, Ireland will renew its drug strategy in 2008; France, Portugal and Romania will renew their drug action plans; Bulgaria, Spain, Cyprus, Lithuania and Slovakia will renew both their drug strategies and their action plans. Finally, the Netherlands, which has the oldest national drug-policy document in Europe, intends to compose a new one during 2008.

There is a growing recognition in Europe of the need to include monitoring and evaluation as an essential component in national drug strategies and action plans. Almost all of the countries mentioned above have produced or plan to produce a progress review of the implementation of their drug strategies or action plans, and some of them, for example Ireland, Cyprus and Portugal, could produce more in-depth evaluations in 2008.

EU Member States differ, however, in their methods and approaches for evaluating national drug strategies and action plans; and there is a need to identify best practices in this field. This was highlighted at a conference on evaluation organised by the Portuguese Presidency of the EU in September 2007. To respond to this challenge, the EMCDDA, in collaboration with Member States, is exploring the possibility of developing European guidelines in this field.

Drug-related public expenditure

For 2006, four EU Member States (Czech Republic, Ireland, Poland, Portugal) provided detailed information on public expenditure associated with tackling drugs (summarised in Table 1). Information on the division of drug-related expenditure between central government and regional or local government was provided by two of the four countries, allowing a comparison of the role played by the different sectors of government. In the countries for which data are available, the bulk of reported drug-related public expenditure is allocated to activities that are funded by central government.

Eleven Member States gave details of expenditure by the State on certain activities undertaken in response to the drug problem. A further two countries provided rough estimates of overall public expenditure related to the drug problem (Spain, Malta), though with no information on the activities on which the money was spent.

In 2005, the total drug-related public expenditure by European countries was calculated to lie somewhere between EUR 13 billion and EUR 36 billion (EMCDDA, 2007a). This figure was estimated by extrapolating the total drug-related expenditures of six countries (Belgium, Hungary, Netherlands, Finland, Sweden, United Kingdom) to the other States. A revised estimate, which includes data from additional countries (Czech Republic, France, Luxembourg, Poland, Slovakia), has recently been proposed (EMCDDA, 2008d). The new estimate of drug-related public expenditure in Europe is EUR 34 billion (95% confidence interval, EUR 28–40 billion), which is equivalent to 0.3% of the combined gross domestic product of all EU Member States. This suggests that State expenditure on the drug problem costs the average EU citizen EUR 60 a year. These figures must, however, still be taken as indicative because of the limited data on which they are based.

Reports on the social cost of drug use

Data on the social cost of drug use (direct and indirect costs caused by drug use) were reported by four Member States. While these reports may provide useful insights into the impact of drug use in the country in which they were conducted, differences in methods and in the way results are reported mean that it is not possible to compare the countries. The lack of comparability in the data from different

countries highlights the need to adopt a common approach towards monitoring the social cost of drug use in Europe.

In Italy, the social cost of illicit drug use was estimated at EUR 6 473 million, with law enforcement activities accounting for the largest share of the total (43%), and the remainder divided between healthcare and social services (27%) and loss of productivity of drug users and people indirectly affected by drug use (30%). In addition, it was estimated that drug users spent EUR 3 980 million for the purchase of illicit drugs. On the basis of these data, the cost of drug use in Italy is estimated to represent 0.7% of the national gross domestic product. In data reported for Austria, in 2004, the division between direct and indirect costs was the opposite of that reported for Italy: of the estimated social cost of drug use of EUR 1 444 million, 72% was accounted for by indirect costs.

The United Kingdom reported that, in 2003/04, the economic and social costs of Class A ⁽⁷⁾ drug use in England and Wales was EUR 22.26 billion, representing an annual cost of EUR 63 940 for each problem drug user. It was suggested that problem drug use accounted for 99% of the total costs. Costs due to drug-related crime, including law enforcement and costs to the victims of drug-related crimes, accounted for the largest proportion of the overall cost (90%, or EUR 20.1 billion).

Development of national legislation

Examining the changes in drug legislation that have been made since the 1998 Ungass on drugs is of particular interest in this year of international, European and national reviews and evaluations of drug-policy documents. Observing the changes in three key areas, this section

Table 1: Drug-labelled public expenditure ⁽¹⁾ by selected EU Member States

Country	Labelled expenditures reported by government sector (EUR)				Total as a proportion of total public expenditure ⁽²⁾ (%)
	Central	Regional	Local	Total	
Czech Republic	12 821 000	3 349 000	1 699 000	17 869 000	0.04
Ireland ⁽³⁾	214 687 000	–	–	214 687 000	0.39
Poland	68 476 000	644 000	13 253 000	82 373 000	0.08
Portugal	75 195 175	–	–	75 195 175	0.11

⁽¹⁾ Public expenditures explicitly 'labelled' as drug-related in official accountancy documents.

⁽²⁾ Total general government expenditure in the year.

⁽³⁾ In Ireland, government departments and State agencies are invited to report their annual drug-related expenditure to the coordinating Department of Community, Rural and Gaeltacht Affairs. These expenditures are not necessarily labelled as drug-related in official accountancy documents.

Sources: Reitox national focal points and Eurostat (<http://epp.eurostat.ec.europa.eu/>).

⁽⁷⁾ Class A drugs are defined as those considered to be the most harmful.

Towards a better understanding of drug-related public expenditure in Europe — EMCDDA 2008 selected issue

In response to the EU drugs action plan 2005–08, the EMCDDA has developed a project aimed at identifying, developing and testing methods for quantifying drug-related public expenditures. A selected issue on this topic gives an overview on the overall figures on drug-related public expenditure in 2005 in the EU Member States and Norway. Most of the expenditures identified were originally 'labelled' as drug related, and were generally traced back by exhaustively reviewing official accountancy documents, thus possibly reflecting the voluntary engagement of the States in the field of drugs. When feasible, hidden or 'unlabelled' expenditures embedded in programmes with broader goals were estimated through modelling techniques. This new twofold approach provides standardised estimates that maximise the validity and cross-country comparability of public disbursements in tackling drugs and drug addiction.

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

asks the question: Do the changes in legal definitions and responses to drug users indicate a new, wider trend in how countries view users of drugs?

Possession for personal use

During the past 10 years, most European countries have moved towards an approach that distinguishes between the drug trafficker, who is viewed as a criminal, and the drug user, who is seen more as a sick person in need of treatment. However, Member States differ considerably in how they have chosen to define these categories in the new laws that they have adopted in recent years.

One of the issues on which Member States have shown the greatest degree of divergence is whether or not to set threshold quantities for personal possession. In the period 2004–06, Bulgaria removed the concept of personal possession, Italy re-enacted it after 12 years without, and the United Kingdom enacted the concept but then chose not to apply it. Belgium and Cyprus introduced defined limit quantities in 2003, for all drugs and for cannabis respectively; while in Germany, the *Länder* are working to implement more consistently a constitutional court ruling whose reference to 'insignificant quantities' was undefined, resulting in interpretations of between 3 and 30 grams. In 2005, in Slovakia, the legal definitions of personal use were widened from a maximum of one dose to a maximum of three and, for a larger amount, 10 doses. At the same time, however, the sentence for possession of

any more than this was raised to a clear minimum of four years in prison, as for a trafficking offence.

Drug use within small groups presents another challenge to attempts to distinguish between users and suppliers. In Belgium, the specific criminal offence of use in a group was repealed in 2003; in the same year, an amendment to the Hungarian criminal code permitted diversion to treatment for the supplier of a small quantity to be consumed 'jointly' (since appealed as being legally unclear). In 2006, Malta found that the minimum six-month sentence for suppliers was not always appropriate in situations of sharing, and changed the law to permit exceptions.

Regarding punishment, maximum or probable penalties for use or possession for personal use, in the absence of aggravating circumstances, have been reduced in various European countries since 2001 — either for all drugs (Estonia, Greece, Hungary, Portugal, Finland) or limited to cannabis (Belgium, Luxembourg, United Kingdom) or drugs of lesser risk (Romania). However, during this period, not all countries have been reducing penalties: France and Poland decided not to change their laws after consultations; and Denmark raised the 'normal' penalties from cautions to fines (which were then increased). A new law in Italy saw drug consumption reinstated as an administrative offence, and cannabis reclassified to be eligible for the same penalties as other illicit substances, such as heroin and cocaine. In the United Kingdom, it has been announced that cannabis is to be reclassified upwards.

Alternatives to punishment

The changes in drug users' access to treatment via the criminal justice system typically share two common features. First, they all widen the scope for directing drug users into treatment. However, some differences exist between countries regarding the stage at which the offer of treatment is made, with most countries offering treatment at the court stage, rather than at the earlier stages of contact with the police or prosecutors. Secondly, they are conditional; breach of the treatment order will restart the procedure of criminal charge, prosecution or punishment.

Countries have introduced or widened options or systems for offenders to be referred to treatment or counselling, as an alternative to punishment or imprisonment, in line with Ungass and EU action plan objectives. In Ireland and Malta, following arrest, drug users can now be referred to treatment; this is also the case in the United Kingdom, where drug testing on arrest is authorised in certain circumstances. Special drug courts have been established

in Ireland, the United Kingdom (England and Scotland) and Norway, and are under discussion in Malta; Portugal set up a system of 'commissions for the dissuasion of drug use' composed of a lawyer, a doctor and a social worker. New laws in other countries have introduced some form of treatment as an alternative to punishment: in France, non-dependent drug law offenders may take, and pay for, awareness courses; in Spain, Hungary and Latvia, custodial sentences may be suspended for drug users undertaking treatment; and in Bulgaria, Hungary, Romania and Turkey, probation may be combined with treatment. The Netherlands aims to increase the use of treatment as a condition of early release from prison. When deemed appropriate, in Finland, sentenced offenders can now be directed towards an open prison if they stay drug-free; in Greece, they may be sent to a special treatment unit. Eligibility for drug-treatment programmes has been extended to those convicted of more serious offences in Italy (if the offence is punishable by up to six years in prison, raised from four years) and Spain (raised from three to five years). In Belgium, at all levels of the criminal justice process, alternatives exist to divert drug-using offenders into treatment.

Further descriptions of the various treatment alternatives to punishment and the extent of their use can be found in the ELDD's 'Topic overview' and 'Legal reports' sections ⁽⁸⁾.

Focus on protecting the public

In the past decade, criminal law has increasingly been used to protect the public from the drug user and, in parallel with the distinction made between the 'sick' user and the 'criminal' trafficker, the category of 'user' is also being legally subdivided into those who do and those who do not trouble or harm other members of society. The measures that reduce criminal penalties for personal use or offer alternatives to punishment, described above, are part of this development. These treatment options or reduced penalties are, for example, granted on condition that the user does not cause some form of public disturbance.

Criteria have also been widened and penalties increased for those offenders who risk harming other members of society. Most legislative activity has concentrated on those taking drugs and then driving (Belgium, Czech Republic, Denmark, Spain, France, Latvia, Lithuania, Portugal, Finland). New laws regulating testing for drugs in the workplace in Ireland, Finland and Norway emphasise that testing is permitted mainly in situations where considerable danger or risk would arise from being under the influence. Drug taking in various forms of transport is

controlled by new laws: trains and ships in Ireland; boats in Latvia; aviation in Finland. The last few years have also seen: laws and strategies to prevent or punish drug-related public nuisance (see the 2005 selected issue); new powers to close bars or other premises or exclude people from them (Belgium, Ireland, Netherlands); and powers to close private dwellings where commercial drug distribution or systematic drug use takes place (respectively, Netherlands, United Kingdom). In parallel, new laws to protect non-users from the use of tobacco have also been introduced across Europe during this time: since 2004, 24 European Member States (all except Greece, Hungary and Poland) have prohibited or severely restricted smoking in enclosed public places, often with sizeable fines for transgressors.

To summarise the legal changes reviewed here: it appears that criminal sanctions have often been reduced for the individual user who avoids any aggravating circumstances, but, almost as a counterbalance, increased for those whose actions may affect other members of society. The latter reflects an increased focus on using criminal law to protect the public.

Drug-related crime

Drug-related crime is a broad concept which may include all crimes committed that are, in some way, linked to drugs ⁽⁹⁾. In practice, routine data are only available in Europe on initial reports of drug law offences, mainly from the police. Though these data are usually taken as indirect indicators of drug use or drug trafficking, it is important to note that they reflect differences in national legislation and the different ways in which the laws are applied and enforced. The data also reflect differences in priorities set and resources allocated by criminal justice agencies to specific offences. In addition, there are variations between national information systems on drug law offences, specially in relation to reporting and recording practices. Because these differences make comparisons between countries difficult, it is more appropriate to compare trends rather than absolute numbers.

Overall, the number of reported drug law offences in EU Member States increased by an average of 36 % between 2001 and 2006 (Figure 2). The data reveal increasing trends in all reporting countries except Bulgaria, Greece, Latvia and Slovenia, which reported an overall decline over the five-year period ⁽¹⁰⁾.

Use- and supply-related offences

The balance between drug law offences related to use and those related to supply (dealing, trafficking, production) is

⁽⁸⁾ <http://eldd.emcdda.europa.eu>

⁽⁹⁾ For a discussion of the relationships between drugs and crime see EMCDDA (2007b).

⁽¹⁰⁾ See Table DLO-1 in the 2008 statistical bulletin.

similar to that reported in previous years. Most European countries reported that the majority of the offences were related to drug use or possession for use, with figures in 2006 ranging up to 93 % in Spain ⁽¹¹⁾. However, in the Czech Republic, the Netherlands, Turkey and Norway, supply-related offences were predominant, with these accounting for between 52 % (Turkey) and 88 % (Czech Republic) of all drug law offences reported in 2006.

The number of drug law offences related to use increased by an average of 51 % between 2001 and 2006 in the European Union, with two thirds of the reporting countries showing an upward trend, and only Slovenia and Norway showing a downward trend over the five-year period ⁽¹²⁾. In addition, it is worth noting that, as a proportion of all drug law offences, use-related offences increased over the same period in half of the reporting countries.

Offences related to the supply of drugs also increased during the period 2001–06, but at a much lower pace, with an average increase of 12 % in the European Union. Over this period, the number of supply-related offences increased in more than half of the reporting countries, and decreased in four countries (Germany, Cyprus, Netherlands, Slovenia) ⁽¹³⁾.

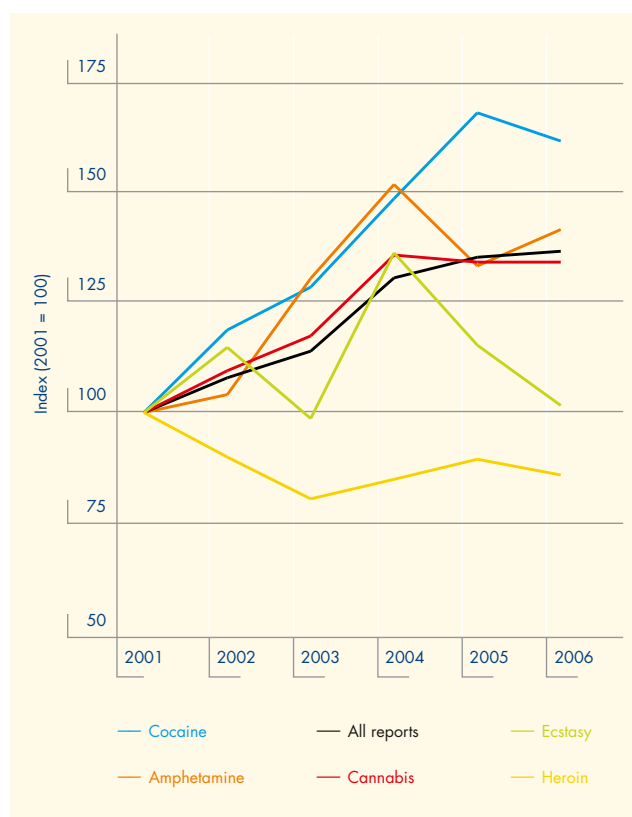
Trends by drug

In most European countries, in 2006, cannabis continued to be the illicit drug most often involved in reported drug law offences ⁽¹⁴⁾. In countries where this is the case, cannabis-related offences accounted for 36–86 % of all drug law offences. In a few countries, drugs other than cannabis were predominant in drug offences: in the Czech Republic, methamphetamine accounted for 60 % of all drug law offences; in Malta, the figure for heroin was 41 %. In Luxembourg, drug law offences were almost equally distributed between cannabis, heroin and cocaine.

In the five-year period 2001–06, the number of drug law offences involving cannabis increased or remained stable in most reporting countries, resulting in an overall average increase of 34 % in the European Union (Figure 2). Downward trends were, however, reported by Bulgaria, the Czech Republic (2002–06), Italy and Slovenia ⁽¹⁵⁾.

Cocaine-related offences increased over the period 2001–06 in all European countries except Bulgaria, Germany and Slovakia. The EU average increased by 61 % over the same period.

Figure 2: Indexed trends in reports for drug law offences in EU Member States, 2001–06



NB: The trends represent the available information on national number of reports for drug law offences (criminal and non-criminal) reported by all law enforcement agencies in the EU Member States; all series are indexed to a base of 100 in 2001 and weighted by country population sizes to form an overall EU trend; the total number of offences reported in 2006 in countries included in the trends (before weighting) were: amphetamine, 41 069; cannabis, 550 878; cocaine, 100 117; ecstasy, 17 598; heroin, 77 242; all reports, 936 866. Countries missing data for two or more consecutive years are not included in the trend calculations: the overall trend is based on all EU countries except the United Kingdom; the trend for cannabis is based on 18 countries, heroin on 18, cocaine on 17, amphetamine on 12 and ecstasy on 13. For additional information on the methodology, see Figure DLO-3 in the 2008 statistical bulletin.

Sources: Reitox national focal points and, for population data, Eurostat (<http://epp.eurostat.ec.europa.eu/>).

Over the period 2001–06, drug law offences related to heroin show a different picture to those related to cannabis or cocaine, dropping by an average of 14 % in the European Union, mainly between 2001 and 2003. However, national trends in heroin offences have been diverging over the period, with a third of the countries reporting upward trends ⁽¹⁶⁾.

The EU average trends in offences for both amphetamine and ecstasy peaked in 2004. While the trend for amphetamine-related offences remained upward (average

⁽¹¹⁾ See Table DLO-2 in the 2008 statistical bulletin.

⁽¹²⁾ See Figure DLO-2 and Table DLO-4 in the 2008 statistical bulletin.

⁽¹³⁾ See Table DLO-5 in the 2008 statistical bulletin.

⁽¹⁴⁾ See Table DLO-3 in the 2008 statistical bulletin.

⁽¹⁵⁾ See Table DLO-6 in the 2008 statistical bulletin. For a complementary analysis of cannabis-related offences, see Chapter 3.

⁽¹⁶⁾ See Table DLO-7 in the 2008 statistical bulletin.

increase of 41 % over 2001–06), the EU average for offences related to ecstasy fluctuated over the period with no overall change between 2001 and 2006.

National drug-related research

Research into the drugs problem is carried out in all European countries, where it provides the information essential to describing and understanding the impact of illicit drugs on a national scale. Based on reports from 25 Member States, Croatia and Norway, it is possible to give an overview of the organisation of drug-related research in European countries. At a time when the importance of evidence-based interventions is increasingly acknowledged, it is notable that 21 countries reported that research results inform drug policy, at least to some degree.

Coordinating and funding

Drug-related research is mentioned in the national drug strategy or action plan of 20 of the 27 reporting countries, either as a specific topic or referred to as an essential component of evidence-based policy. In 15 of the 27 reporting countries, structures to coordinate drug-related research exist at national level. Only five countries report that drug-related research is not mentioned in their national strategies or that they do not have a national coordination structure in this field.

The State is the main source of funding for drug-related research reported by the Member States, either through programmes for general research or through research programmes in the drugs field. Health and social sciences are two of the main areas of general research in which funding may be found for drug-related research. Funding

specifically designated for drug-related research can be available through national drug coordination bodies (Czech Republic, Spain, France, Luxembourg, Hungary, Poland, Portugal, Norway). Both types of funding programmes often couple research on illicit drugs with other areas within the addiction field, such as alcohol, tobacco and gambling. The funds are mostly available through contracts for commissioned research or through framework programmes to which researchers apply. Other types of funding sources reported include foundations, scientific academies, private institutions, special funds for the fight against drugs, the European Commission and the United Nations.

Structures and projects

The majority of countries reported that research takes place mostly in universities and in specialised centres, some of them hosting national focal points, followed by public and private research centres. National research networks were reported by some countries (Germany, Spain, Portugal). These can play an important role in the organisation and funding of research, and may also promote more direct links between research and practice.

Among the major studies carried out since 2000 reported by the Member States, more than half were in epidemiology and about one third in applied research (mainly evaluations of interventions in prevention and treatment). Also cited were studies in determinants, risk and protective factors for drug use, consequences of drug use, and drug mechanisms and affects.

Constraints to drug-related research were reported by several countries. Among the problems identified were: organisational aspects, such as a lack of coordination and scattered resources (Germany, France, Austria); the

More to come on drug-related research

Detailed information on research in the drugs field carried out in European countries has been collected by the EMCDDA through its network of Reitox national focal points. The information provided by the Member States includes a description of national research organisations and funding arrangements. Member States have also provided lists of main studies carried out since 2000 and identified scientific papers, scientific journals and websites through which the findings of drug-related research carried out in their country have been disseminated. The EMCDDA is making this and more information available through different dissemination products and channels (see <http://www.emcdda.europa.eu/themes/research>).

For a more in-depth review of this topic, see the 2008 selected issue on drug-related research (<http://www.emcdda.europa.eu/publications/selected-issues>).

The European Commission has commissioned an in-depth comparative analysis of research into illicit drugs in the European Union. The study should provide an overview of the funding available for drug-related research from the European Union and Member States, building on the results of the selected issue on research, and widening the scope to include research in the field of drug supply reduction and security. The study will review the existing research infrastructure within Member States and at European level, and make a comparison with other regions, such as North America and Australia. It will conclude with recommendations for policy options to address the knowledge gaps and improve cooperation at European level. It will also assess existing European networks, including those of the EMCDDA and its Reitox national focal points. Results from this study will be available in early 2009.

lack of qualified research staff (Latvia, Hungary); and methodological aspects (data protection issues, problems in reaching hidden populations, lack of continuity in research projects). Several countries identified the limited funding available for drug-related research as a major constraint (Belgium, Greece, Poland, Romania, Finland).

Dissemination

A total of 25 European peer-reviewed journals specialising in the drugs field and publishing in 11 languages other than English were identified. The majority of these national journals publish English

abstracts and welcome international contributions. In addition to publications specialising in illicit drugs and addiction, articles on illicit drug use are also published in peer-reviewed journals from a wide array of disciplines and in professional magazines. In 2006, research findings in the drugs field were published in more than 100 such European journals. Other types of publication, including those by national focal points, also play an important role in dissemination.

Reitox national focal points also play an important role in disseminating research results in all the reporting countries, mainly by means of their national reports.



Chapter 2

Responding to drug problems in Europe — an overview

Introduction

This chapter presents an overview of the responses to drug problems in Europe, where possible highlighting trends, developments and quality issues. The set of measures reviewed here includes prevention, treatment, harm reduction and social reintegration, which taken together form a comprehensive demand-reduction system. The chapter also includes a review of the available data on the needs of drug users in prisons and the existing responses in this particular setting. In addition, future monitoring challenges in another field of drug policy, drug supply reduction, are briefly discussed.

Prevention

Drug prevention can be divided into different levels or strategies, from environmental to indicated prevention, which ideally do not compete but complement each other. The following description of the current situation and trends in Europe is based on qualitative data on the provision of universal and selective prevention reported to the EMCDDA in 2007 ⁽¹⁷⁾ and on a literature review on indicated prevention (EMCDDA, 2008f).

Universal prevention

The objectives of universal school-based drug prevention in Europe appear to have shifted in recent years. In 2007, developing life skills was the most frequently reported objective of prevention activities (12 out of 28 reporting countries), whereas in 2004, half of the countries (13/26) reported raising awareness and providing information as their main objective. Creating protective school environments, a form of structural intervention, was also more often mentioned as a main objective in 2007 (six countries) than it was in 2004 (four countries). The changes in reported objectives may reflect the adoption of a more rational and evidence-based approach, but the extent to which this change in objectives reflects actual provision is unclear.

Events for parents and strategies solely providing information (information days, visits of experts or of police

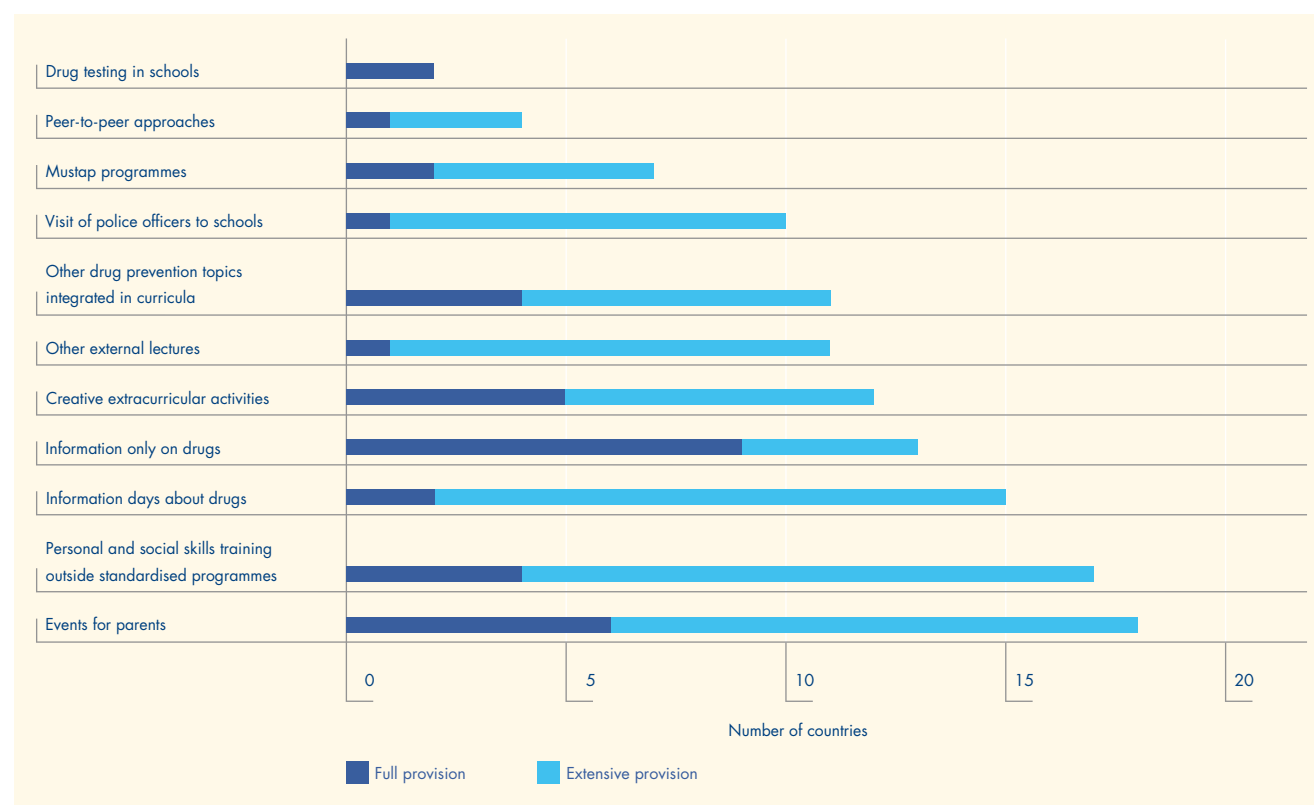
Improving the monitoring of drug supply reduction

Drug supply reduction can be defined as encompassing all activities aimed at preventing illicit drugs from reaching users. These may include instruments such as international conventions, and EU and national legislation and policies, as well as actions addressing the various processes and actors involved in the production and trafficking of illicit drugs but also involved in the diversion or illicit manufacture of licit substances (medicines, precursor chemicals) for illicit ends and in the laundering of drug money. Law enforcement activities, alternative development initiatives and projects aimed at preventing drug-related crime all contribute to reducing the supply of illicit drugs. Monitoring and analysis constitute, as is the case with drug demand reduction, an important support for these activities and their evaluation.

Recent data collection exercises in the framework of the annual progress reviews of the EU action plan on drugs and the Ungass review (see Chapter 1) have revealed a mixed picture regarding the availability of response data in the supply reduction field. Activities related to international projects are usually well documented, while data on activities at national level are often difficult to access and compare. The European Commission, Eurostat, Europol and the EMCDDA are working to improve this situation in the framework of the next EU action plan on drugs (2009–12). Existing conceptual frameworks and information systems, as well as potential information sources for monitoring and analysing supply reduction activities in the Member States, are to be reviewed. There is also a need to better understand drug markets, in particular supply and distribution arrangements, both in their economic and social dimensions. Two studies funded by the European Commission will explore both the information systems and sources on drug supply reduction and the international drug markets.

agents at schools) are among the types of school-based intervention reported by the largest number of countries (Figure 3). The effectiveness of these interventions is unclear. In contrast, some of the more strongly evidence-based interventions are reported in only a few countries. These include standardised programmes, peer approaches or interventions specifically for boys; all of which aim

⁽¹⁷⁾ Data were provided by national experts in the Member States.

Figure 3: Most frequent intervention types in universal school-based prevention

NB: Mustap = multisession, standardised programmes with printed material.
 Sources: Reitox national focal points.

to improve communication skills, increase abilities in handling conflicts, stress and frustration, or correct normative misperceptions about drug use. The overall predominance of interventions that lack or have only a weak evidence base might be due to the fact that they require fewer resources and less staff training.

In addition to activities targeting drug use specifically, structural interventions also exist in schools. By aiming to create protective and normative social environments, structural interventions seek to influence young people's choices about drug use (Toumbourou et al., 2007). This approach matches overall prevention policies that increasingly embrace stricter regulations on tobacco and alcohol in schools. As such, 20 countries report total smoking bans in all schools, and 18 countries report full or extensive provision⁽¹⁸⁾ of drug policies in schools. In central and western Europe in particular, Member States report having implemented structural interventions aimed to reduce tobacco and alcohol use in schools. These prevention measures may also be complemented by other structural measures, such as improving the design of school buildings and school life.

Family-based prevention is another widely utilised prevention approach. Eleven countries reported full or extensive provision of family meetings and evenings. In common with school-based prevention, family-based prevention seems to be mainly focused on providing information. Intensive coaching and training for families, an approach that has shown consistent efficacy across studies (Petrie et al., 2007), is offered on a limited basis, with only seven countries reporting the highest provision levels.

Selective prevention

Selective prevention is guided by social and demographic indicators, such as unemployment, delinquency or truancy rates. It intervenes with specific groups, families or entire communities, where people, due to their scarce social ties and resources, may be more likely to develop drug use or progress into dependency.

Thirteen countries report that most of their family-based prevention is selective. However, important risk conditions of families are rarely addressed in Europe. Across 30 reporting countries, only seven report full or extensive provision of interventions for substance use in families,

⁽¹⁸⁾ Extensive provision: the intervention is provided in a majority of locations where the size of the target population is sufficient for its implementation.
 Full provision: the intervention is available in almost all locations where the size of the target population is sufficient for its implementation.

and five report providing interventions for family conflict and neglect. In addition, the following categories of interventions were each reported by four countries: addressing social disadvantage (e.g. unemployment), helping with criminal justice problems, or assisting marginalised families from ethnic minorities. Furthermore, only three countries address the needs of families coping with mental health problems.

Risk conditions of young vulnerable groups, for example, young offenders, homeless, truant, disadvantaged and minority youth, are also rarely addressed despite increasing political importance. Since 2004, an increasing number of drug policies have indicated them as primary targets for prevention interventions, but the reported level of intervention provision has not increased during this period. More detailed data are presented in the 2008 selected issue on vulnerable groups of young people.

Indicated prevention

Indicated prevention aims to identify individuals with behavioural or psychological problems that may be predictive for developing problem substance use later in life, and to target them individually with special interventions. Such individuals include school dropouts, and those with psychiatric disorders, antisocial behaviour or early signs of drug use. A report recently published by the EMCDDA (2008f) presents longitudinal studies defining problem trajectories, neurobehavioural studies and the increasing knowledge about brain plasticity and the role of neurotransmitters, and highlights findings from interventions reported by Member States.

Children with behavioural disorders, such as coexisting attention deficit (hyperactivity) disorder and conduct disorder, are at high risk of developing substance use problems. Intervening early with children with behavioural disorders requires close cooperation between medical, social and youth services. The German 'multi-module treatment concept', for example, offers a combination of counselling for parents and carers; concurrent medical, psychotherapeutic and psychosocial support; and educational support in the kindergarten or school. The Irish approach of targeted education and psychological counselling for young people, especially for preventing developmental problems in schools, education facilities and the family, yielded overall positive evaluation results. In the Netherlands, a study on the long-term preventive effects of treating disruptive behaviours in young people in middle childhood (aged 8–13) found that manualised behavioural therapy showed significantly better follow-up

Drugs and vulnerable groups of young people — EMCDDA 2008 selected issue

Young people from certain groups are at risk of becoming socially excluded, and this may be associated with an increased likelihood of using drugs and of developing drug use problems. By focusing interventions designed to reduce drug use and drug-related harm on specific groups, the chance of meeting the needs of these groups can be increased, as can the likelihood of the intervention being successful.

This selected issue provides in-depth information on the risk factors and vulnerability profiles of specific groups and explores drug use and drug-related problems among them. It also investigates the consequences of vulnerability resulting from truancy, academic failure, social disadvantage, family problems and delinquency. Also discussed are specific responses to drug use and drug problems among vulnerable groups, including legislation, prevention and treatment.

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

outcomes on smoking and cannabis use compared to treatment as usual (Zonneville-Bender et al., 2007).

Efficacy and risks of interventions

Drug use among children and in families remains the main focus of targeted prevention in Europe. A large number of studies on the social and neurobehavioural predictors for progression into substance use show that non-drug-focused prevention efforts may also have an effect on drug use. Both selective and indicated prevention may moderate the effect of an early developmental disadvantage, its translation into social marginalisation and subsequent progression into substance abuse. Several research studies have shown that interventions delivered during the early school years, aimed to improve educational environments and reduce social exclusion, also have a moderating effect on later substance use (Toumbourou et al., 2007).

The overall effectiveness of school-based prevention has been questioned (Coggans, 2006; Gorman et al., 2007). Recent literature reviews ⁽¹⁹⁾, however, show that certain components of school-based prevention, such as the focus on normative beliefs and life skills, seem to be effective. For example, the EU-Dap study, a European randomised controlled trial, co-funded by the European Commission, to develop and evaluate a school-based prevention programme, reported positive outcomes ⁽²⁰⁾. A follow-up

⁽¹⁹⁾ See the 'Best practice' portal (<http://www.emcdda.europa.eu/themes/best-practice>).

⁽²⁰⁾ <http://www.eudap.net>

The EMCDDA 'Best practice' portal

The EMCDDA has this year launched the first module of its Internet portal on best practice for drug-related interventions (prevention, treatment, harm reduction and social reintegration). The portal provides an overview on the latest evidence on the efficacy and effectiveness of different interventions, presenting tools and standards aimed at improving the quality of interventions, as well as highlighting examples of evaluated practice from across Europe. It is aimed at practitioners, policymakers and researchers in the drugs field and has a strong Europe-wide focus.

The first module of the portal focuses on universal prevention, in particular on evidence of efficacy which is based on several reviews published since 2000. For details of the findings, see the portal (<http://www.emcdda.europa.eu/themes/best-practice>).

The portal provides information on the efficacy of various interventions, but it should be noted that the evidence base remains sometimes limited and that making choices between different interventions requires caution. Furthermore, as controlled trials measure the efficacy of programmes, how certain interventions will perform in different settings remains subject to question. The new edition of the EMCDDA databank, available on the portal, features examples of evaluated interventions in different countries and settings, and may provide additional guidance.

study found that 15 months after the intervention, the effect of the programme remained stable, with reduced frequencies of drunkenness and of cannabis use observed among participants. The 'Unplugged' programme used in the trial challenged norms about the acceptance and beliefs about the prevalence of substance use among youth.

Prevention should not only be effective but must also be safe — unwanted effects must be kept to a minimum. Thus, the risks of negative effects should be considered carefully when designing and evaluating interventions. This is particularly important for universal school-based prevention, which is delivered to a large and diverse target population. For instance, providing information about drug effects alone, a widespread approach in Europe, is not only ineffective but may carry risks of unwanted effects (Werch and Owen, 2002). The same applies to mass-media campaigns, which can carry risks of increasing the propensity for substance use ⁽²¹⁾.

One way to ensure that prevention programmes are evidence based and that risks of unwanted effects are reduced is to develop standards for the delivery and

content of prevention projects. The number of Member States reporting standards for project design and evaluation has increased from three in 2004 to nine in 2007. Several Member States report that they are developing certification processes to guarantee the quality of programmes and the efficient use of resources from public budgets (Czech Republic, Hungary, Poland, Portugal). In the Czech Republic, for instance, certification of preventive activities is a condition for receiving subsidies from the State budget.

Treatment

This section aims to provide an overview of drug treatment in Europe, describing the organisation and provision of services.

Organisation

In general, drug-treatment services are mainly provided through the public sector in EU Member States, though non-governmental organisations (NGOs) may play an equal role (seven Member States), or even be the main provider of treatment services (five Member States). General practitioners also play an important role, and in some countries are key providers of substitution treatment. The private sector can also be involved in some countries, mainly in residential care. Nevertheless, funding for drug treatment is mostly provided by the public purse or is linked to social or health insurances.

Provision

Drug treatment takes place in a variety of settings, including outpatient and inpatient treatment centres, general practice, low-threshold agencies and prison. Outpatient settings, including general practice, account for most of the treatment for drug use in Europe, mainly because substitution treatment is usually delivered in these settings. Drug users entering treatment in outpatient settings are, according to the latest figures from the treatment demand indicator, on average around 30 years old and predominantly male ⁽²²⁾. Around one third refer themselves to treatment, 22 % are referred to treatment by the criminal justice system, with this figure growing in recent years, and the remaining are referred through social and health services or through informal networks ⁽²³⁾.

Half of the clients entering treatment in outpatient settings reported primary opioid use, while 21 % cited cannabis and 16 % cocaine as their primary drug. Increases in the

⁽²¹⁾ See Chapter 3 in this report and the 2007 annual report.

⁽²²⁾ See Tables TDI-10 (part iii) and TDI-21 (part ii) in the 2008 statistical bulletin.

⁽²³⁾ See Table TDI-16 in the 2008 statistical bulletin.

proportion of clients, and especially new clients, referred to treatment for problems with non-opioid drugs may reflect improvements in treatment availability for users of cannabis and cocaine in several Member States as well as an increase in the numbers of users seeking treatment for these drugs (see Chapters 3 and 5). However, the overall availability of services specifically targeted to the needs of non-opioid drug users remains limited.

Treatment in inpatient settings takes place mostly in therapeutic communities, psychiatric hospitals and specialised departments in general hospitals. The services provided range from short-term detoxification to prolonged psychiatric and abstinence-based treatment programmes. Residential services can be particularly suited for drug users with complex treatment needs, due to co-morbid physical and mental health problems. Inpatient clients are, on average, similar to outpatient clients: around 30 years old, mainly males and entering drug treatment for primary opioid use ⁽²⁴⁾. The proportion of drug clients with no employment and unstable accommodation is, however, higher among inpatient clients than among outpatient clients, in most countries where comparison is possible ⁽²⁵⁾.

Historically, drug-treatment services have been organised around the needs of opioid users, who still represent the main group of users in treatment. In the majority of Member States, substitution treatment combined with psychosocial care has become the predominant option for opioid users. With the introduction of high-dosage buprenorphine treatment in Cyprus in 2007, substitution treatment is now available in all Member States and in Croatia and Norway ⁽²⁶⁾. In Turkey, substitution treatment has yet to be introduced, though it is permitted under a 2004 regulation on treatment centres. After methadone, buprenorphine is the second most commonly prescribed opioid substitute, and its use in the treatment of opioid dependence has increased in recent years (see Chapter 6). It is now available as a treatment option in all Member States except Bulgaria, Hungary and Poland. In 2006, it is estimated that 600 000 opioid users received substitution treatment in Europe, with an increase since the previous year being reported in 16 of the 22 countries providing data.

Harm reduction

The prevention and reduction of drug-related harm is a public health objective in all Member States and in the EU drug strategy and action plan (European Commission, 2007a). The main interventions in this field are opioid

substitution treatment and needle and syringe exchange programmes (NSPs), which target overdose deaths and the spread of infectious diseases. These measures are reported to be available in all countries except Turkey (see also Chapters 6 and 8) and, while considerable differences exist in the range and levels of service provision, the general European trend is one of growth and consolidation of harm-reduction measures.

In addition, most countries provide a range of healthcare and social services at low-threshold agencies. However, some countries report that the implementation of harm-reduction measures has been delayed due to the lack of political support. In Greece, expansion of low-threshold services and substitution treatment has been stalled; needle and syringe programmes in Romania and Poland were scaled down in 2006, after external funding ceased; Cyprus's only needle and syringe exchange programme is not officially endorsed. In Hungary, where NSPs and outreach work have been increasing, a study among the out-of-treatment population suggests that provision is still insufficient and access barriers are high.

Due to the specific profile of the Baltic States and Romania with regard to HIV/AIDS, international donors continue to play an important role in these countries. Financial support for harm-reduction activities is provided by the Global Fund 'Programme to fight against AIDS, malaria and tuberculosis', while in Estonia, Lithuania and Latvia, UNODC has recently launched the project 'HIV/AIDS prevention and care among injecting drug users and in prison settings'.

Finally, some Member States have recently looked at the consequences of the introduction of harm-reduction interventions. In France, the observed decrease in mortality rates among drug users coincided with the introduction of triple antiviral therapies, the development of a harm-reduction policy and the availability of opioid substitution treatments; in Spain, the decreasing number of injectors combined with easy access to methadone maintenance treatment was associated with a decline of infectious diseases and drug-related deaths among drug users (De la Fuente et al., 2006); and in Portugal, available data show a levelling off of infectious diseases, which probably can be attributed, in part, to an increase in the availability of harm-reduction and treatment responses.

Social reintegration

Drug users in treatment often report high levels of unemployment and homelessness. Such disadvantage tends also to be more widespread among specific groups

⁽²⁴⁾ See Tables TDI-10 (part vii) and TDI-21 (part iv) in the 2008 statistical bulletin.

⁽²⁵⁾ See Tables TDI-13 and TDI-15 in the 2008 statistical bulletin.

⁽²⁶⁾ See Tables HSR-1 and HSR-2 in the 2008 statistical bulletin.

of users, particularly women, heroin and crack users, those who belong to ethnic minorities and those with co-morbid psychiatric problems.

Social reintegration is recognised as an essential component of comprehensive drug strategies, and it can be implemented at any stage of drug use and in different settings. The aims of social reintegration interventions may be achieved through capacity building, improvement of social abilities, measures to facilitate and promote employment and to obtain or improve housing. In practice, reintegration services may offer vocational counselling, work placements and housing support, while prison-based interventions may link inmates to community-based housing and social support services in preparation for their release.

Homelessness, together with living in unstable accommodation, is one of the most serious forms of social exclusion facing drug users, affecting about 10% of drug users entering treatment in 2006 ⁽²⁷⁾. While housing support is provided to drug treatment clients in many countries, shortages have also been documented, and two countries report that it is difficult for drug users to gain access to the general services for the homeless that are traditionally used by problem alcohol users (Ireland, Italy). New measures that can help meet the accommodation needs of drug users are being undertaken in three countries (Belgium, Denmark, Netherlands), which report that facilities for homeless long-term addicts are being centralised and specialised care homes are being opened for drug users with problem behaviour or co-morbidity.

Helping drug treatment clients find employment is a key element in social reintegration, as one in every two clients entering treatment is unemployed ⁽²⁸⁾. New approaches to helping clients to find and hold down employment are reported to have shown success, these include: 'mentoring schemes', subsidised workplaces (since 2006 also possible in Lithuania), and special coaching of employers and employees, as carried out under the 'Ready for work' project in Ireland, or various 'work and social agencies' in the Czech Republic.

Health and social responses in prison

Prisons represent an important setting for the delivery of health and social interventions to drug users. In this section, data on drug use and drug users in European prisons is reviewed along with recent information on the

provision of services to imprisoned drug users and new laws on drug treatment in prison.

Drug use

Data available from a variety of studies continue to point to an over-representation of drug users in European prisons, compared to the general population. Surveys carried out between 2001 and 2006 show that the proportion of prisoners ⁽²⁹⁾ who report having ever used an illicit drug varies greatly between prison populations, detention centres and countries, from a third or less (Bulgaria, Hungary, Romania) to above 50% in most studies, and up to 84% in a women's prison in England and Wales. Cannabis remains the illicit drug most frequently reported by prisoners, with lifetime prevalence levels of up to 78%. Although estimates of lifetime use of other substances can be very low in some prisons (down to 1%), some studies report lifetime prevalence levels of 50–60% for heroin, amphetamines or cocaine among prisoners ⁽³⁰⁾. The most damaging forms of drug use may also be concentrated among prisoners, with some studies reporting that more than a third of those surveyed have ever injected drugs ⁽³¹⁾.

The fact that drugs find their way into most prisons, despite all measures being taken to reduce the supply of drugs, is recognised by both prison experts and policymakers. Studies carried out between 2001 and 2006 in Europe show that between 1% and 56% of inmates report having used drugs within prison, and up to a third of inmates have injected drugs while in custody ⁽³²⁾. This raises concerns around the potential spread of infectious diseases, especially in relation to the sharing of injection equipment.

The prison population in the European Union is over 607 000 ⁽³³⁾, with an estimated annual turnover of more than 860 000 prisoners. In most countries, the proportion of prisoners sentenced for drug law offences is in the range of 10–30%. From the data available, it can be estimated that more than 400 000 people with past or current experience of illicit drug use pass through EU prisons every year. And among these, there will be a considerable number of problem drug users. The healthcare needs of this large population of former or current drug users in European prisons will, to some extent, be determined by health problems related to drug use, notably infectious diseases such as hepatitis B and C viruses and HIV/AIDS (see Chapter 7).

⁽²⁷⁾ See Table TDI-15 in the 2008 statistical bulletin.

⁽²⁸⁾ See Table TDI-20 in the 2008 statistical bulletin.

⁽²⁹⁾ The term 'prisoners' is used in a broad sense here, and includes both on-remand and convicted incarcerated persons.

⁽³⁰⁾ See Table DUP-1 in the 2008 statistical bulletin.

⁽³¹⁾ See Table DUP-2 in the 2008 statistical bulletin.

⁽³²⁾ See Tables DUP-3 and DUP-4 in the 2008 statistical bulletin.

⁽³³⁾ Council of Europe Annual Penal Statistics (SPACE), based on a prison population survey with reference to 1 September 2006.

Healthcare

The responsibility for healthcare in prison lies, in most countries, with the Ministry of Justice. However, this is changing, and in a growing number of European countries, the responsibility has been transferred to the health system (France, Italy, England and Wales in the United Kingdom, Norway). In Spain, comprehensive services for drug users are developed in all prisons according to the action plan of the national strategy on drugs (2000–08) and based on a cooperation protocol between the Ministry of Health and the Ministry of the Interior, signed in 2005. In other countries, in order to meet the needs of increasing numbers of incarcerated drug users, prisons have established cooperation with public health services and specialist non-governmental drugs agencies in the community.

Interventions targeting drug-using prisoners have expanded in the European Union. Compared to five years ago, more countries now report activities in the following

areas: drug-related information and prevention; screening for infectious diseases and vaccinations; and drug dependence treatment, including substitution treatment. In addition, these interventions have become more widely available within countries. Prison-based substitution treatment is officially available in all countries except Bulgaria, Estonia, Latvia, Lithuania, Cyprus, Slovakia and Turkey, though, in many countries, the overall accessibility of this treatment option is limited. Spain is currently the only European country that provides a wide range of harm-reduction measures in prisons.

In 2006, only four Member States reported socio-demographic data and information on drug use patterns of prisoners in drug treatment through their national treatment monitoring systems. In France, Cyprus and Slovakia, an opioid, usually heroin, is most often reported as the primary drug by those entering drug treatment; while in Sweden, primary amphetamine use is the main reason for entering treatment in prison, reflecting broadly the patterns of problem drug use within these countries.

Recent legislation on drug treatment in prison

In 2006 and early 2007, six countries revised their legal frameworks and guidelines affecting prisoners' rights to drug treatment.

In Belgium, a 2006 directive from the Ministry for Justice states that inmates have the right to the same range of treatment options as are available outside prison. Meanwhile, in Ireland new Prison Service guidelines emphasise the healthcare standard for treatment services, which should be comparable to those available in the community, while being appropriate to the prison setting.

In Denmark, a change in the law from January 2007 entitles imprisoned drug users to free treatment for their drug use. The law stipulates that the treatment should normally start within 14 days of the prisoner requesting it from the Danish Prison and Probation Service. However, there is no such entitlement if the offender is expected to be released within three months or is considered unfit or not motivated for treatment.

In Romania, a new legal basis for establishing substitution treatment in prisons was created in May 2006 by the Common Order of the Ministries for Justice, Public Health, and Administration and Internal Affairs regarding the continuation of integrated medical, psychological and social assistance programmes for inmates.

In Norway, a circular in 2006 from the Ministry of Justice and the Ministry of Health and Social Affairs strengthened cooperation between the two sectors and aimed at providing better follow-up during and after the serving of sentences. More specifically, in Slovakia, a 2006 law permitted the provision of psychological services to drug users on remand who are suffering from withdrawal symptoms. The aim of this law is to provide drug users with such services at the time when they are most needed, at the time of enforced withdrawal immediately upon entering custody. It also created a legislative framework to support the existing special treatment units for convicted drug users.



Chapter 3

Cannabis

Introduction

The European picture in respect to cannabis has evolved considerably over the last decade, as has the debate on how to respond appropriately to the widespread use of this drug. In the early and mid-1990s a few countries stood out as having a high prevalence, whereas the European norm was levels of use which, by today's standards, were low. In almost all countries, cannabis use increased during the 1990s and early 2000s, and this has resulted today in a far less varied European picture, even if differences between countries still exist. Moreover, the last few years have seen a growing understanding of the public health implications of the long-term and widespread use of this drug, and rising reported levels of treatment demand for cannabis-related problems. Europe may now be moving into a new phase, as data are pointing to a stabilising or even decreasing situation. Levels of use remain high by historical standards, however; what constitutes an effective response to cannabis use remains a key question in the European debate on drugs.

Supply and availability

Production and trafficking

Cannabis can be cultivated in a wide range of environments and grows wild in many parts of the world, and it is currently believed that the plant is cultivated in 172 countries and territories (UNODC, 2008) ⁽³⁴⁾. These facts taken together mean that producing estimates of the worldwide production of cannabis with any precision is likely to be very difficult. The latest UNODC figure for the global production of herbal cannabis stands at 41 600 tonnes (2006), of which more than half is accounted for by the Americas (North America and South America) and close to a quarter by Africa (UNODC, 2008).

The widespread cultivation of cannabis also means that a significant proportion of trafficking is likely to be intra-regional. This is the case for some herbal cannabis in Europe, where in addition to home production ⁽³⁵⁾, Albania and the Netherlands have been noted as source countries

Drug supply and availability — data and sources

Systematic and routine information to describe illicit drug markets and trafficking is still limited. Production estimates of heroin, cocaine and cannabis are obtained from cultivation estimates based on fieldwork (sampling on the ground) and aerial or satellite surveys. These estimates have some important limitations linked, for instance, with variations in yield figures or with the difficulty of monitoring crops which are not grown in restricted geographical areas, like cannabis.

Drug seizures are often considered as an indirect indicator of the supply, trafficking routes and availability of drugs; however, they also reflect law enforcement priorities, resources and strategies, the vulnerability of traffickers and reporting practices. Data on purity or potency and retail prices of illicit drugs may also be analysed in order to understand retail drug markets. However, the availability of this type of data may be limited and there may be questions of reliability and comparability. Intelligence information from law enforcement agencies may help complete the picture.

The EMCDDA collects national data on drug seizures, purity and retail prices in Europe. Other data on drug supply comes largely from UNODC's information systems and analyses, complemented by additional information from Europol. Information on drug precursors is obtained from the INCB, which is involved in international initiatives to prevent the diversion of precursor chemicals used in the manufacture of illicit drugs.

As many parts of the world lack sophisticated information systems related to drug supply, some of the estimates and other data reported, though representing the best approximations available, must be interpreted with caution.

(Reitox national reports). Herbal cannabis in Europe is also reported to come from other parts of the world, including: west and southern Africa (Nigeria, Angola), south-east Asia (Thailand), south-west Asia (Pakistan) and the Americas (Colombia, Jamaica) (CND, 2008; Europol, 2008).

Global production of cannabis resin was estimated at 6 000 tonnes in 2006, down from 7 500 tonnes in 2004 (UNODC, 2007a), with Morocco remaining the main international producer. The area under cannabis resin production declined from 134 000 hectares in 2003 to

⁽³⁴⁾ For information on the sources of data for drug supply and availability, see the box on this page.

⁽³⁵⁾ See 'Cannabis production in Europe', p. 37.

76 400 hectares producing 1 066 tonnes in 2005 (UNODC and Government of Morocco, 2007). Resin production is also reported in Afghanistan, where it is rising rapidly, Pakistan, India, Nepal, and Central Asian and other CIS countries (UNODC, 2008). Cannabis resin produced in Morocco is typically smuggled into Europe via the Iberian peninsula (Europol, 2008), with some of it being further distributed from the Netherlands.

Seizures

In 2006, 5 230 tonnes of herbal cannabis and 1 025 tonnes of cannabis resin were seized worldwide, down from peak levels in 2004. North America continued to account for the bulk of herbal cannabis seized (58%), while quantities of resin seized remained concentrated in western and central Europe (62%) (UNODC, 2008).

In Europe, an estimated 177 000 seizures of herbal cannabis, amounting to 86 tonnes, were made in 2006 ⁽³⁶⁾. The United Kingdom is the EU Member State reporting the most seizures of herbal cannabis, though data are not yet available for 2006. Turkey reported seizures of record amounts of herbal cannabis in 2006. The number of herbal cannabis seizures in Europe has increased steadily since 2001, while there has been an overall decrease in the quantity seized, until 2005, with an increase noted in the most recent data.

Seizures of cannabis resin in Europe exceed herbal seizures both in terms of number and quantity: with twice as many seizures (325 000) and the amount intercepted (713 tonnes) eight times higher. Most seizures of resin continue to be reported by Spain (which accounted for about half of all seizures and for about two thirds of the quantity seized in 2006), followed, at a distance, by France and the United Kingdom. After a period of stabilisation in 2001–03, the number of cannabis resin seizures is increasing in Europe, while the quantities intercepted increased until 2003–04, but thereafter have been declining.

In 2006, an estimated 10 500 seizures in Europe resulted in the recovery of about 2.3 million cannabis plants ⁽³⁷⁾ and 22 tonnes of cannabis plants (64% accounted by Spain). Following a steady increase since 2001, the number of seizures of cannabis plants stabilised in 2006 ⁽³⁸⁾. After a sharp decline in 2002 from a record amount seized in 2001, the number of plants seized in Europe has been on the increase, although it levelled off in 2006 at half the number reported in 2001. Over the same five-year period, the amount of cannabis plants seized in

Cannabis production in Europe

The issue of domestic production of cannabis has become more important in recent years across Europe, reflecting the fact that a majority of European countries now report local cultivation of cannabis and some substantial seizures of cannabis plants. Cannabis grown in Europe is reported to come from both indoor facilities, where it is often cultivated intensively, and from outdoor plantations. The size of plantations varies widely, depending on the motivation and resources of the grower, from a few plants for personal use to several thousand in large sites intended for commercial purposes.

Available information is patchy and does not allow an accurate assessment of the extent of cannabis cultivation in Europe. Nevertheless, reports from a number of countries suggest that it may no longer be viewed as marginal. For example, French population surveys in 2005 estimated that about 200 000 people had grown cannabis at least once in their lifetime. In the United Kingdom, more than 1 500 'cannabis farms', with 400 plants per site on average, were reportedly closed down by police in London in 2005–06 (Daly, 2007) and most herbal cannabis now available is thought to be produced either locally or in other European countries. In the Netherlands, cannabis cultivation is widespread in some parts of the country, with an estimated total of 6 000 cultivation sites dismantled in 2005 and 2006.

Cannabis production seems to have experienced a sharp increase from the early to mid-1990s in some western European countries, partly as a response of cannabis consumers to the perceived poor quality and high price of imported resin, then the most widely used cannabis product. In some countries, it seems that a majority of users are now consuming locally produced herbal cannabis. This partial substitution of domestically produced herbal cannabis for imported resin was made possible by advances in horticultural knowledge and technology (to maximise yields and avoid detection), which then spread through the Internet (Hough et al., 2003; Jansen, 2002; Szendrei, 1997/98). Cannabis that is produced locally also has the advantage for the producer that it does not need to be transported across national borders.

Europe and reported in kilograms shows a steady increase, accelerating in 2006 due to record seizures in Lithuania.

Potency and price

The potency of cannabis products is determined by their content of delta-9-tetrahydrocannabinol (THC), the primary active constituent. Cannabis potency varies widely between and within countries, and between different cannabis samples and products. For a number of methodological

⁽³⁶⁾ The data on European drug seizures mentioned in this chapter can be found in Tables SZR-1, SZR-2, SZR-3, SZR-4, SZR-5 and SZR-6 in the 2008 statistical bulletin.

⁽³⁷⁾ Since Turkey reported having seized no cannabis plants in 2005 and 2006, after reporting high levels of seizures of this material over 2001–04, it was excluded from the European analysis.

⁽³⁸⁾ This picture is preliminary as data for the United Kingdom, the country reporting the most cannabis plants seized in 2005, are not yet available for 2006.

reasons, data are difficult to interpret in this area and the extent to which seizures analysed reflects the overall market questionable. Research suggests that in general cannabis produced domestically under intensive conditions tends to be of higher potency. In 2006, the reported THC content of resin samples ranged from 2.3% to 18.4%, while that of herbal cannabis ranged from under 1% to 13%. Over the period 2001–06, the potency of resin and herbal cannabis remained stable or decreased in many of the 16 European countries providing sufficient data; however, upward trends were noted for imported cannabis resin in the Netherlands and for herbal cannabis in seven other countries. Estimates of the potency of locally produced herbal cannabis over a number of years are available only for the Netherlands, which reported a decline to 16.0% in 2006, from a peak of 20.3% in 2004 ⁽³⁹⁾.

Typical retail prices of both herbal cannabis and cannabis resin varied from EUR 2 to EUR 14 per gram, with a majority of European countries reporting prices in the range EUR 4–10 for both products. During the period 2001–06, with the exception of Belgium and Germany, retail prices of cannabis resin (corrected for inflation) were reported to have decreased. The available data from most countries point to a more stable situation for herbal cannabis prices during this period, with the exception of Germany and Austria, where signs of increasing prices were noted.

Prevalence and patterns of use

Among the general population

It is conservatively estimated that cannabis has been used at least once (lifetime prevalence) by more than 70 million Europeans, that is over one in five of all 15- to 64-year-olds (see Table 2 for a summary of the data). Although considerable differences exist between countries, with national figures varying from 2% to 37%, half of the countries report estimates in the range 11–22%.

Many countries report comparatively high prevalence levels of last year and last month use of cannabis. It is estimated that around 23 million Europeans have used cannabis in the last year, or on average, about 7% of all 15- to 64-year-olds. Estimates of last month prevalence will include those using the drug more regularly, though not necessarily in an intensive way (see below). It is estimated that about 12.5 million Europeans used the drug in the previous month, on average about 4% of all 15- to 64-year-olds.

Cannabis use among young adults

Cannabis use is largely concentrated among young people (15–34 years), with the highest levels of use

Population surveys: an important tool for understanding patterns and trends of drug use in Europe

Drug use in the general or school population can be measured through representative surveys, which provide estimates of the proportion of individuals that report having used specific drugs over defined periods of time. Surveys also provide useful contextual information on patterns of use, sociodemographic characteristics of users and perceptions of risks and availability ⁽¹⁾.

The EMCDDA, in close collaboration with national experts, has developed a set of common core items for use in adult surveys (the 'European Model Questionnaire', EMQ). This protocol has now been implemented in most EU Member States ⁽²⁾. However, there are still differences between countries in the methodology used and year of data collection, and this means that small differences, in particular between countries, should be interpreted with caution ⁽³⁾.

As surveys are expensive to conduct, few European countries collect information each year, although many collect it at intervals of two to four years. In this report, data are presented based on the most recent survey available in each country, which in most cases is between 2004 and 2007.

Of the three standard time frames used for reporting survey data, lifetime prevalence is the broadest. This measure does not reflect the current drug use situation among adults, but is useful for reporting on school students and to provide insight into patterns of use and incidence. For adults, the focus is on last year and last month use ⁽⁴⁾. Identifying those who are using regularly or having problems with their use of drugs is important, and progress is being made in this respect with the development of short scales to assess more intensive forms of use in the general population, adults and school students (see the box on developing psychometric scales in the 2007 annual report).

⁽¹⁾ More information on survey methodology is available in the 2008 statistical bulletin (<http://www.emcdda.europa.eu/stats08/gps/methods>).

⁽²⁾ Available at <http://www.emcdda.europa.eu/themes/monitoring/general-population>

⁽³⁾ For more information on national surveys, see Table GPS-121 in the 2008 statistical bulletin.

⁽⁴⁾ The EMCDDA standard age ranges are: all adults (15–64 years) and young adults (15–34 years). This report uses the terms 'lifetime use or prevalence', 'last year prevalence' and 'last month prevalence' and, sometimes, the more colloquial terms 'lifetime experience', 'recent use' and 'current use', respectively.

generally being reported among the 15- to 24-year-olds. This is the case in almost all European countries, the exceptions being Belgium, Cyprus and Portugal ⁽⁴⁰⁾.

Population survey data suggest that, on average, 31% of young European adults (15–34 years) have ever used cannabis, while 13% have used the drug in the last year and 7% have used it in the last month. It is estimated that even higher proportions of Europeans in the 15–24 age

⁽³⁹⁾ See Tables PPP-1 and PPP-5 in the 2008 statistical bulletin for potency and price data.

⁽⁴⁰⁾ See Figure GPS-1 in the 2008 statistical bulletin.

group have used cannabis in the last year (17%) or last month (9%), though on average slightly fewer among this age group have tried the drug (30%). National prevalence estimates of cannabis use vary widely between countries in all measures of prevalence, with countries at the upper end of the scale reporting values up to 10 times those of the lowest-prevalence countries.

Cannabis use is higher among males than among females (see the 2006 selected issue on gender), although marked differences between countries are observed. For example, the ratio of males to females among those reporting use of cannabis in the last year ranged from 6.4 males for each female in Portugal to 1.3 in Italy.

Cannabis use among school students

After tobacco and alcohol, cannabis also continues to be the psychoactive substance most commonly used by school students.

Ever in lifetime use of cannabis by 15- to 16-year-old school students may be taken to reflect recent or current use as first experimenting with this substance often occurs at or around this age. Data from the 2005/06 HBSC survey of 15-year-olds showed large variation in lifetime prevalence of cannabis use across 27 countries. Prevalence estimates of under 10% for ever in lifetime use of cannabis were reported by five countries; 11 countries reported values between 10% and 20% and 11 countries

between 21% and 31% (Currie et al., 2008) ⁽⁴¹⁾. In this age group, boys usually report a higher prevalence of cannabis use than girls, but the difference in reported prevalence between the sexes is small or even absent in some of the countries with the highest prevalence estimates.

As with lifetime experience, there is a wide variation between countries in estimates of use in the last 30 days among school students. In some countries it is virtually unreported, whereas in others around 15% of those questioned report use during the last 30 days, with sometimes even higher figures found among males. On the basis of data collected in earlier ESPAD surveys, it is estimated that in 2003 around 3.5 million (22.1%) 15- to 16-year-old school students had used cannabis at least once in their lifetime in the EU Member States together with Croatia and Turkey, and, around 1.7 million (11%) had used the drug in the month prior to the survey.

International comparisons

European figures can be compared with those from other parts of the world. For instance, in the United States, the national survey on drug use and health (Samhsa, 2005) estimated a lifetime prevalence of cannabis use of 49% among young adults (15–34 years, recalculated by the EMCDDA) and a last year prevalence of 21%. For the same age group, lifetime prevalence of cannabis use was 58% and last year prevalence 28% in Canada (2004), while in Australia (2004) the figures were 48% and 20%. All these figures are above the corresponding European averages, which are respectively 31% and 13%.

Patterns of cannabis use

Available data point to a variety of patterns of cannabis use. Of those aged 15–64 who have ever used cannabis, only 30% have done so during the last year ⁽⁴²⁾. But, among those who have used the drug in the last year, on average 56% have done so in the last month.

Estimating intensive and long-term patterns of use is an important public health issue. Daily or almost daily use (use on 20 days or more in the last 30 days) may be an indicator of intensive use. Data on this form of cannabis use in Europe was collected in 2007/08 as part of a 'field trial' coordinated by the EMCDDA in collaboration with national experts and the Reitox focal points of 13 countries. On the basis of this data, albeit limited, it is estimated that over 1% of all European adults, about 4 million, are using cannabis daily or almost daily. Most of these cannabis users, about 3 million, are aged 15–34,

Recent school surveys

The 'Health behaviour in school-aged children' (HBSC) survey is a WHO collaborative study which investigates children's health and health behaviour and has included questions about cannabis use among 15-year-old students since 2001. The second round of this survey with questions about cannabis use was conducted between October 2005 and May 2006, with the participation of 26 EU Member States and Croatia.

The fourth round of the 'European school survey project on alcohol and other drugs' (ESPAD) was conducted in 2007 with the participation of 25 EU Member States, Croatia and Norway. This survey specifically investigates substance use among school students who turn 16 during the calendar year. Results from the latest surveys will be published in December 2008.

Participation in both of these international school surveys, each conducted every four years, has grown in each round and now includes most European countries.

Spain, Italy, Portugal, Slovakia, Sweden and the United Kingdom also reported data on cannabis use from their own national school surveys in 2006.

⁽⁴¹⁾ See Figure EYE-5 in the 2008 statistical bulletin.

⁽⁴²⁾ See Figure GPS-2 in the 2008 statistical bulletin.

Table 2: Prevalence of cannabis use in the general population — summary of the data

Age group	Time frame of use		
	Lifetime	Last year	Last month
15–64 years			
Estimated number of users in Europe	71.5 million	23 million	12.5 million
European average	21.8%	6.8%	3.8%
Range	1.7–36.5%	0.8–11.2%	0.5–8.7%
Lowest-prevalence countries	Romania (1.7%) Malta (3.5%) Bulgaria (4.4%) Cyprus (6.6%)	Malta (0.8%) Bulgaria (1.5%) Greece (1.7%) Sweden (2.0%)	Malta (0.5%) Sweden (0.6%) Lithuania (0.7%) Bulgaria (0.8%)
Highest-prevalence countries	Denmark (36.5%) France (30.6%) United Kingdom (30.1%) Italy (29.3%)	Italy, Spain (11.2%) Czech Republic (9.3%) France (8.6%)	Spain (8.7%) Italy (5.8%) United Kingdom France, Czech Republic (4.8%)
15–34 years			
Estimated number of users in Europe	42 million	17.5 million	10 million
European average	31.2%	13%	7.3%
Range	2.9–49.5%	1.9–20.3%	1.5–15.5%
Lowest-prevalence countries	Romania (2.9%) Malta (4.8%) Bulgaria (8.7%) Cyprus (9.9%)	Malta (1.9%) Greece (3.2%) Cyprus (3.4%) Bulgaria (3.5%)	Greece, Lithuania, Sweden (1.5%) Bulgaria (1.7%)
Highest-prevalence countries	Denmark (49.5%) France (43.6%) United Kingdom (41.4%) Spain (38.6%)	Spain (20.3%) Czech Republic (19.3%) France (16.7%) Italy (16.5%)	Spain (15.5%) France, Czech Republic (9.8%) United Kingdom (9.2%)
15–24 years			
Estimated number of users in Europe	20 million	11 million	6 million
European average	30.7%	16.7%	9.1%
Range	2.7–44.2%	3.6–28.2%	1.2–18.6%
Lowest-prevalence countries	Romania (2.7%) Malta (4.9%) Cyprus (6.9%) Greece (9.0%)	Greece, Cyprus (3.6%) Sweden (6.0%) Bulgaria, Portugal (6.6%)	Greece (1.2%) Sweden (1.6%) Cyprus, Lithuania (2.0%)
Highest-prevalence countries	Denmark (44.2%) Czech Republic (43.9%) France (42.0%) United Kingdom (39.5%)	Czech Republic (28.2%) Spain (24.3%) France (21.7%) United Kingdom (20.9%)	Spain (18.6%) Czech Republic (15.4%) France (12.7%) United Kingdom (12.0%)
Information based on the last survey available for each country. The study year ranges from 2001 to 2007. The average prevalence for Europe was computed by a weighted average according to the population of the relevant age group in each country. In countries for which no information was available, the average EU prevalence was imputed. Populations used as basis: 15–64 (328 million), 15–34 (134 million) and 15–24 (64 million). The data summarised here are available under 'General population surveys' in the 2008 statistical bulletin.			

representing approximately 2–2.5 % of all Europeans in this age group ⁽⁴³⁾.

Trends in intensive cannabis use in Europe are difficult to assess, but among the countries participating in both field trials in 2004 and 2007 (Ireland, Greece, Spain, France, Italy, Netherlands, Portugal), the average increase was about 20 %, although this estimation is largely influenced by the figures of Spain, France and Italy.

Repeated use of cannabis can be fairly stable over long periods of time, even among younger users. A recently published German study, which followed up for 10 years a cohort of 14- to 24-year-olds, showed that among those who had used cannabis repeatedly (five times or more in their life) at the beginning of the study period, a large proportion continued to use the drug, with 56 % reporting use after four years and 46 % still using the drug after 10 years. Conversely, occasional use of the drug at the beginning of the period (one to four times) did not appear to be associated with subsequent development of long-term and more problematic forms of use (Perkonig, 2008).

Cannabis dependence has been increasingly recognised as a possible consequence of regular use of the drug, even if the severity and consequences may appear less serious than those commonly found with some other psychoactive substances. Nevertheless, due to the relatively larger proportion of the population using cannabis regularly, the overall impact of intensive forms of cannabis use on public health may be significant. Analysis of national population survey data for the United States reveals that around 20–30 % of daily users scored positive for dependence between 2000 and 2006 ⁽⁴⁴⁾. In an Australian study, 92 % of long-term cannabis users were classified as having been dependent at some point in their life, with more than half of them judged to be dependent at the time of the study. A follow-up study carried out one year later suggested that, among long-term users, measures of cannabis use and dependence may be stable for this length of time (Swift et al., 2000).

The EMCDDA is developing, in collaboration with several countries, methods for monitoring the more intensive and significant long-term forms of cannabis use, including dependence. Psychometric scales are being tested in several EU countries and the available evidence will be analysed this year. This information may assist EU Member

States in assessing the implications of more problematic forms of cannabis use on public health and in planning appropriate interventions ⁽⁴⁵⁾.

Patterns of cannabis use among school students

HBSC data show that frequent cannabis use remains rare among 15-year-old schoolchildren. Only six countries report a prevalence of frequent cannabis use (defined here as 40 times or more during the previous 12 months) above 2 %. However, frequent use is generally more prevalent among males, with estimates up to 5 % in seven countries. Reports indicate that correlations exist between the more problematic patterns of cannabis use and belonging to a vulnerable group (e.g. young offenders, truants, low educational achievers), suggesting that specific strategies are needed to provide a safety net for these particularly vulnerable young people. This issue is highlighted in the 2008 selected issue on vulnerable groups.

An investigation of polydrug use has been made in cooperation with ESPAD by comparing school students aged 15–16 years in 2003 who have used cannabis during the previous 30 days with the other students. The comparison shows that, on average, students who have used cannabis are more likely to have used other substances. Although among cannabis users the last month prevalence of other drug use remained low (below 10 %), levels of cigarette smoking and binge drinking among cannabis users was about double that (80 %) found among the general student population. These comparisons indicate that cannabis use is associated with considerably higher than average rates of both licit and illicit drug use ⁽⁴⁶⁾.

Trends in cannabis use

Only Sweden and Norway report a series of surveys of young people or conscripts dating back to the 1970s. A first wave of use was observed in the 1970s, followed by a decline in the 1980s and a new substantial increase during the 1990s. Analysis of year of initiation in recent surveys also identified substantial cannabis use expansion in Spain (mid-1970s) and Germany (early 1990s) (see the 2004 and 2007 annual reports).

National survey data reported to the EMCDDA show that in almost all EU countries cannabis use increased

⁽⁴³⁾ The European averages presented are a rough estimation based on a weighted average (for the population) for countries with information. The average result is imputed for countries without information. The figures obtained are 1.2 % for all adults (15–64 years) and 2.3 % for young adults (15–34 years). See Table GPS-7 in the 2008 statistical bulletin.

⁽⁴⁴⁾ NSDUH online analysis facility (<http://webapp.icpsr.umich.edu/cocoon/SAMHDA/SERIES/00064.xml>), accessed on 25 February 2008 and analysed using variables MJDAY30A and DEPNDMRJ.

⁽⁴⁵⁾ Interventions, e.g. forms of treatment, are presented in 'Treatment provision', p. 44.

⁽⁴⁶⁾ The analysis is based on data from the database produced within the European school survey project on alcohol and other drugs (ESPAD), and is in line with the rules for the use of the ESPAD database. The national principal investigators providing data for each of the countries included can be found on the project's website (www.espad.org).

markedly during the 1990s, in particular among young people (Figure 4) and school students. Around the year 2000, lifetime prevalence of cannabis use among the 15–34 age group increased to levels in excess of 30% in nine countries and around 40% in two cases, while last year prevalence reached 15–20% in seven countries and last month prevalence 8–15% in six countries. Of particular interest is the trend in cannabis use in the United Kingdom (England and Wales), the country that reported the highest prevalence estimates in Europe in the early and mid-1990s, but where more recently a steady downward trend has been observed, particularly among the 16–24 age group ⁽⁴⁷⁾.

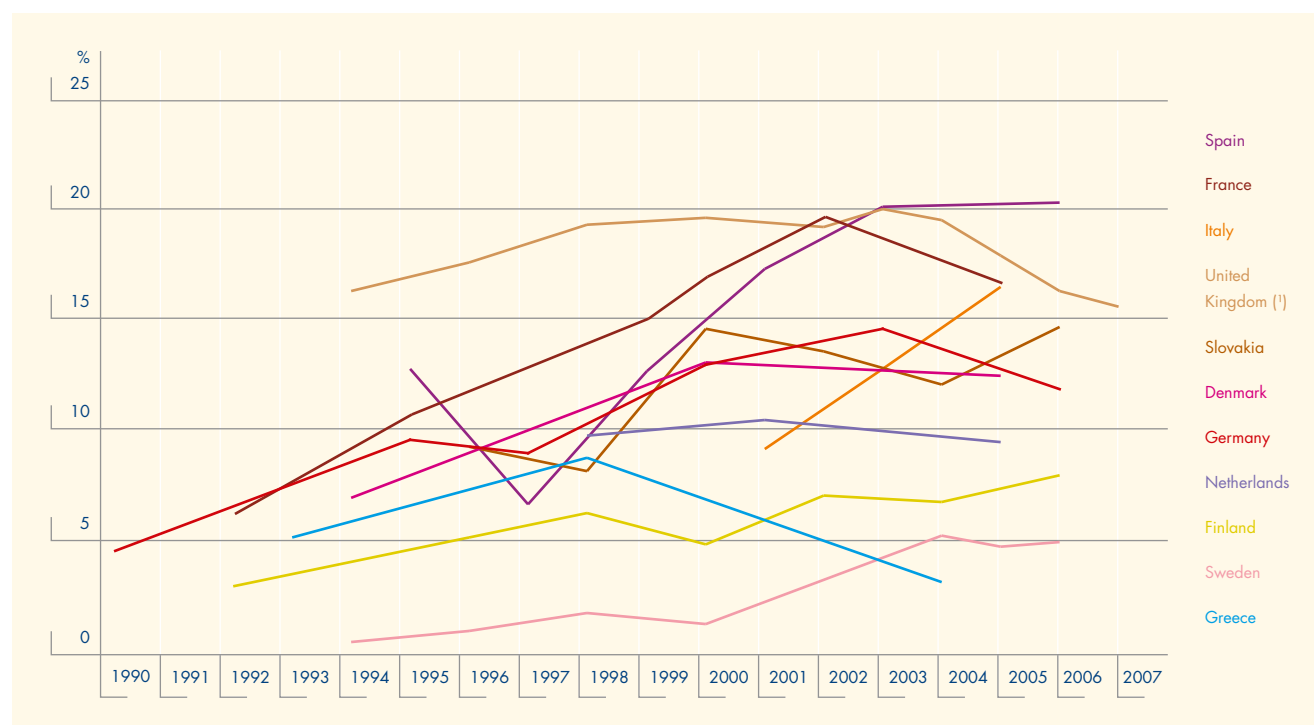
Information from recent national surveys suggests that cannabis use is stabilising in many countries. Of the 16 countries for which it is possible to analyse the trend from 2001 and 2006, last year prevalence among young adults increased by 15% or more in six countries, decreased in three by a similar amount and was stable in seven ⁽⁴⁸⁾.

Stable or decreasing trends are also evident from the most recently published data on cannabis use among

school students. A comparison of HBSC data of 2001/02 and 2005/06 shows a stable or decreasing trend in both lifetime and other more frequent cannabis use among 15-year-old school students in most EU countries ⁽⁴⁹⁾. Other recent national school surveys conducted in Spain, Portugal, Slovakia, Sweden and the United Kingdom also report stable or decreasing trends.

As cannabis availability in Europe as a whole does not seem to have changed and prices seem to be decreasing in most countries providing information, an explanation for the current stabilisation or decrease has to be found elsewhere. The 2005 French population survey *Baromètre sante* noted that among those who had stopped using cannabis, 80% cited a lack of interest as the reason for quitting. Part of the explanation may also be found in the observed reduction in tobacco smoking, which shares the same route of administration as cannabis and the behaviour may, therefore, be associated at some level (Reitox national reports and Currie et al., 2008).

Figure 4: Trends in last year prevalence of cannabis use among young adults (aged 15–34)



(¹) England and Wales.

NB: See Figure GPS-4 in the 2008 statistical bulletin for further information.

Sources: Reitox national reports (2007), taken from population surveys, reports or scientific articles.

⁽⁴⁷⁾ See Figure GPS-10 in the 2008 statistical bulletin.

⁽⁴⁸⁾ Where information on the exact years was not available, information from the previous or following year was used; where this information was unavailable, analysis was not conducted.

⁽⁴⁹⁾ See Figures EYE-4 and EYE-5 in the 2008 statistical bulletin.

Decreases in experimental or occasional use of cannabis are not necessarily directly related to trends in the regular use of the drug. This can be seen in data from two consecutive surveys among adolescents in Germany, which have shown decreases in lifetime and last year prevalence, while 'regular use' of cannabis (more than 10 times in the last year) remained unchanged (2.3%) (BZgA, 2004 and BZgA, 2007, cited in the German national report).

Cannabis treatment

Treatment demand patterns

In 2006, among 390 000 reported treatment demands (data available from 24 countries), cannabis was the primary reason for entering treatment in about 21 % of all cases, making it the second most reported drug after heroin ⁽⁵⁰⁾. However, inter-country differences were considerable, with cannabis cited as the primary reason for entering treatment by less than 5 % of all clients in Bulgaria, Lithuania, Luxembourg and Romania, whereas it is reported as the principal drug by more than 30 % of treatment clients in France, Hungary and the Netherlands ⁽⁵¹⁾.

There are also considerable variations regarding new treatment demands, with cannabis being cited as the primary drug by less than 10 % of new clients in Bulgaria, Lithuania and Romania and by more than 50 % in Denmark, Germany, France and Hungary ⁽⁵²⁾. Those variations may be explained by differences in prevalence of intensive cannabis use, drug treatment organisation or referral practices. For instance, in some countries with high proportions of cannabis patients (e.g. Germany, Hungary, Austria, Sweden), drug treatment is offered as an alternative to punishment and it is sometimes compulsory in the event of arrest; in France, which reports the highest proportion of cannabis clients in Europe, specialised centres for cannabis users have recently been created and this will have a direct impact on reporting.

Cannabis users are mainly treated in outpatient centres, but in some countries (Ireland, Slovakia, Finland, Sweden) around one third are reported to seek treatment in inpatient settings ⁽⁵³⁾. Most cannabis clients are reported to be self-referred, but this referral route is less common among cannabis clients than among those seeking help for problems with other drugs.

Those seeking treatment in outpatient settings for primary cannabis use also report using other drugs: 21 % report using alcohol as a secondary substance, 12 % amphetamines and ecstasy, and 10 % cocaine. Among those receiving treatment for other primary drugs, cannabis is reported as the second most frequently cited secondary substance (21 %) after alcohol (32 %) ⁽⁵⁴⁾.

Trends in new demands for drug treatment

Among the approximately 160 000 new demands for drug treatment (data available from 24 countries) reported in 2006, cannabis clients represent the second largest group (28 %), after heroin clients (34 %). Compared to the proportion of all clients reporting cannabis as their primary drug, the proportion among new clients is higher. Half of the countries report that the proportion of new clients requesting treatment for cannabis as their primary drug is increasing. The absolute number of new demands for cannabis treatment increased over the period 2002–06, while the proportion of new clients entering treatment for primary cannabis use increased between 2002 and 2005 and remained at the same level in 2006 ⁽⁵⁵⁾.

The increasing trend observed in cannabis treatment demands may be linked to a number of factors: increases in cannabis use or intensive and long-term use; improvements in data coverage; recent expansion and diversification of the treatment system, which was previously focused on heroin users but is now targeting users of other drugs; and changes in legislation and policies, sometimes resulting in an increase of cannabis treatment referrals by the criminal justice system (EMCDDA, 2008a). The recent stabilisation of new treatment demands linked to cannabis use could also be explained by more recent trends regarding cannabis use, changes in the treatment system or modifications of the routes of referral to treatment.

Client profiles

Cannabis users entering treatment in outpatient settings are predominantly young males, with a gender ratio of 5.2 males for every female and a mean age of 24 years. Cannabis is the most frequently reported primary drug among the younger age groups. Among those entering treatment for the first time, primary use of cannabis is reported by 67 % of those aged 15–19 years and 80 % of those younger than 15 years ⁽⁵⁶⁾.

⁽⁵⁰⁾ See Figure TDI-2 (part ii) in the 2008 statistical bulletin.

⁽⁵¹⁾ See Table TDI-5 (part ii) in the 2008 statistical bulletin.

⁽⁵²⁾ See Table TDI-4 (part ii) in the 2008 statistical bulletin.

⁽⁵³⁾ See Table TDI-24 in the 2008 statistical bulletin.

⁽⁵⁴⁾ See Tables TDI-22 and TDI-23 (part i) and (part iv) in the 2008 statistical bulletin.

⁽⁵⁵⁾ See Figures TDI-1 and TDI-2 and Tables TDI-3 (part iv) and TDI-5 (part ii) in the 2008 statistical bulletin.

⁽⁵⁶⁾ See Tables TDI-10 and TDI-21 (part ii) in the 2008 statistical bulletin.

Most cannabis clients appear to be relatively well socially integrated in comparison to those seeking help for problems with some other types of drug. Many are still in education and living in stable accommodation, often with their parents; however, recent research also reports a social profile of cannabis patients differing from the general population of the same age group and reporting a more disadvantaged background (EMCDDA, 2008a).

Overall, primary cannabis users entering treatment can be divided into three groups, in terms of frequency of use: those who use it occasionally (30%), those using it once to several times a week (30%) and those using it daily (40%) ⁽⁵⁷⁾. However, considerable differences are observed between countries, particularly in the proportion of regular cannabis users entering treatment. In those countries where cannabis clients are more numerous, the proportion of daily users varies from over 70% in the Netherlands and Denmark, to 40–60% in Spain, France and Italy, and 20–30% in Germany and Hungary.

Treatment provision

A survey commissioned by the EMCDDA on the provision of cannabis treatment in a sample of drug treatment services in 19 Member States found that half of the surveyed services did not have programmes specifically dedicated to cannabis problems (EMCDDA, 2008a). This finding suggests that many cannabis users are treated within the same settings as the users of other drugs, which may present difficulties, both to treatment staff and to clients.

Of the specialist services surveyed, most offered short courses of treatment for cannabis use of usually less than 20 sessions. Treatment generally took the form of individual counselling and therapy or counselling about the possible implications of cannabis use. Some agencies reported cannabis detoxification, family therapy, therapeutic community and mutual help groups as possible components of treatment. Use of residential care for cannabis treatment when provided was generally in the context of socio-behavioural problems respite.

The scientific literature in this area suggests that a number of psychotherapies have been shown to be effective for cannabis treatment, including motivational therapy and cognitive-behavioural therapy, but no form of psychotherapy has been found to be more effective than any other (Nordstrom and Levin, 2007). Although most studies on the efficacy of cannabis treatment have been carried out in the United States and Australia, European studies are now beginning to be launched or reported. A

German randomised controlled trial examining a treatment programme for adolescents with cannabis disorder 'Candis' started in 2004. The programme is based on motivational enhancement, cognitive behavioural therapy and psychosocial problem solving. Initial results show that half of the patients had stopped using cannabis by the end of the treatment. Another 30% reduced their cannabis use. Furthermore, a noticeable decrease in associated mental and social problems was reported. A follow-up study is planned.

Initiatives to provide treatment for young cannabis users have been reported by several countries. In France, about 250 cannabis consultation centres, providing counselling and support to users and their families, have been set up throughout the country since 2005. In Denmark, special funds have recently been allocated for the development of targeted programmes for young cannabis users. In addition, Belgium, Germany, France, the Netherlands and Switzerland are collaborating in an international study of the effectiveness of a comprehensive family-based treatment for problematic cannabis use (Incant) ⁽⁵⁸⁾.

In Germany, there are attempts to transfer the Internet-based cannabis cessation programme 'Quit the shit' ⁽⁵⁹⁾, which provides interactive counselling in collaboration with outpatient treatment facilities, to municipal structures of youth welfare and drug care or facilities of drug dependence prevention.

The use of information and communications technology in drug demand reduction interventions continues to grow in Europe. In 2006/07, the availability of counselling and advice on drug use was mentioned by nine Member States, with eight reporting the use of the Internet (Czech Republic, Germany, Estonia, Netherlands, Portugal, Austria, Slovakia, United Kingdom), while Denmark reported the use of SMS. These Internet-based services are targeted at young people and focus on problems related to alcohol and cannabis.

Cannabis users in contact with the criminal justice system

Cannabis is the illicit drug most often mentioned in police reports for drug law offences ⁽⁶⁰⁾ in Europe, and offences related to this drug in the European Union have increased by an average of 34% between 2001 and 2006 (Figure 2). The available data show that the majority of reported cannabis offences are related to use and possession for use rather than to trafficking and supply; with use-related offences in the majority of reporting countries accounting for 62–95% of all reported cannabis offences.

⁽⁵⁷⁾ See Table TDI-18 in the 2008 statistical bulletin.

⁽⁵⁸⁾ <http://www.incant.eu>

⁽⁵⁹⁾ <http://www.drugcom.de>

⁽⁶⁰⁾ See Table DLO-6 in the 2008 statistical bulletin.

With many drug law offenders being young cannabis users, who might otherwise not come into contact with drug services, there have been reports of increasing cooperation between judicial authorities and prevention and counselling services in schools and youth welfare facilities. Germany, Spain (Catalonia), Luxembourg and Austria have implemented protocols and programmes for young people breaking drug laws or who have been convicted for the use or possession of drugs, mostly cannabis. The offender may be given the choice of completing a course, instead of paying a fine. The programmes offered in the various countries aim to prevent

further development of drug use and re-offending, and may include family, school or psychological counselling.

A follow-up evaluation of the German FReD programmes for young offenders (100 respondents) found that 44% of the ex-participants reduced their use of alcohol and tobacco, 79% reduced or stopped the consumption of illicit drugs and 69% reported no re-offending since concluding the course. An evaluation of the similar youth offending teams (YOT) in the United Kingdom found that this approach had considerable potential benefits (Matrix Research, 2007).

Smoking bans and cannabis

The possible links between tobacco policies and cannabis smoking is an issue meriting attention. Smoking bans are becoming more widespread in Europe, and nine Member States now have full smoking bans (public and workplaces including restaurants and bars) in place, and Belgium, Denmark, Germany, the Netherlands and Portugal have recently introduced at least partial smoking bans.

The link between tobacco use and later illicit drug use tends to fall away when adjusting for underlying risk factors, as has been shown by a review of prospective studies (Mathers et al., 2006). However, in Europe, cannabis use is more prevalent among tobacco smokers than among non-smokers and strong

regulatory tobacco policies could favourably influence perceived norms, which are predictors for both tobacco and cannabis use.

There is also some evidence that cannabis is an economic complement (i.e. responding in the same direction to price and availability) to cigarettes (Cameron and Williams, 2001). Isolated studies found that higher cigarette taxes appear to decrease the intensity of marijuana use and may have a modest negative effect on the probability of use among males (Farrelly et al., 2001).

Finally, it is worth noting that the Dutch ban on smoking tobacco in restaurants and bars applies also to coffee shops, and that the city of Amsterdam has decided to ban cannabis smoking in public.

Chapter 4

Amphetamines, ecstasy and LSD

Introduction

Globally, after cannabis, amphetamines (a generic term that includes both amphetamine and methamphetamine) and ecstasy are among the most commonly consumed illicit drugs. In Europe today, in terms of the absolute numbers, cocaine use may be higher, but the geographic concentration of cocaine in a few countries means that for most of the European Union, some form of synthetically produced drug remains the second most commonly used illicit substance. Moreover, in parts of Europe, use of amphetamines constitutes an important part of the drug problem, accounting for a substantial proportion of those in need of treatment.

Amphetamine and methamphetamine: differences and similarities

On the illicit drugs market, the main representatives of the amphetamines group are amphetamine and methamphetamine (and their salts) — two closely related synthetic substances, members of the phenethylamine family. Both substances are central nervous system stimulants, sharing the same mechanism of action, and having similar behavioural effects, tolerance, withdrawal and prolonged (chronic) use effects. Amphetamine is less potent than methamphetamine, but in uncontrolled situations the effects are almost indistinguishable.

Amphetamine and methamphetamine products mostly consist of powders, but 'ice', the pure crystalline hydrochloride salt of methamphetamine is also used. Tablets containing either amphetamine or methamphetamine may carry logos similar to those seen on MDMA and other ecstasy tablets.

Given the physical forms in which they are available, amphetamine and methamphetamine may be ingested, snorted, inhaled and, less commonly, injected. Unlike the sulphate salt of amphetamine, methamphetamine hydrochloride, particularly the crystalline form ('ice'), is sufficiently volatile to be smoked.

Source: EMCDDA drug profiles (<http://www.emcdda.europa.eu/publications/drug-profiles/methamphetamine>).

Amphetamine and methamphetamine are central nervous system stimulants. Of the two drugs, amphetamine is by far the more commonly available in Europe, whereas significant methamphetamine use appears to be restricted to the Czech Republic and Slovakia.

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 sometimes found in ecstasy tablets (MDA, MDEA). Ecstasy use was virtually unknown in Europe before the late 1980s, but increased dramatically during the 1990s. Its popularity has historically been linked with the dance-music scene and, in general, synthetic drug use at high prevalence is associated with particular cultural sub-groups or social settings.

Consumption estimates of lysergic acid diethylamide (LSD), by far the most widely known hallucinogenic drug, have been low and somewhat stable for a considerable time in Europe. However, there appears to be a growing interest among young people in naturally occurring hallucinogenic substances.

Supply and availability

Amphetamine

Global amphetamine production, estimated at 126 tonnes in 2006, remains concentrated in Europe, which accounted for 79% of all amphetamine laboratories reported in 2006 (UNODC, 2008), though it is spreading to other parts of the world, notably North America and south-east Asia ⁽⁶¹⁾. Globally, over 19 tonnes of amphetamines was seized in 2006, most of which was intercepted in the Near and Middle East (67%), linked to 'Captagon' tablets ⁽⁶²⁾ produced in south-eastern Europe, followed by amphetamine seizures made in western and central Europe (27%), reflecting Europe's role as both a

⁽⁶¹⁾ For information on the sources of data for drug supply and availability, see p.36.

⁽⁶²⁾ Captagon is one of the registered trade names for fenetylline, a synthetic central nervous system stimulant, although tablets sold with this logo on the illicit market are commonly found to contain amphetamine mixed with caffeine.

major producer and consumer of this drug (CND, 2008; UNODC, 2008).

Most amphetamine seized in Europe is produced, in order of importance, in the Netherlands, Poland and Belgium, and to a lesser extent in Estonia and Lithuania. In 2006, 40 sites involved in the production, packaging or storage of amphetamines were discovered in the European Union (Europol, 2007a); and the UNODC (2008) reports that 123 laboratories were dismantled in European countries.

Turkey reported seizures of about 20 million amphetamine tablets with the logo 'Captagon'. Production of amphetamine in this form is reported in both Bulgaria and Turkey, and is thought to be largely intended for exportation to consumer countries in the Near and Middle East.

In Europe, an estimated 38 000 seizures amounting to 6.2 tonnes of amphetamine powder were made in 2006. While the provisional figures for 2006 suggest a decline from the higher levels reported in 2004 and 2005, both seizures and the amount of amphetamines intercepted have increased over the five-year period 2001–06⁽⁶³⁾. However, this conclusion is provisional as the most recent data from the United Kingdom, the country in Europe which typically reports the most seizures, are not yet available. Seizures of amphetamine tablets, as opposed to powder, are increasingly being reported by a few countries, with a total of 390 000 tablets seized in the European Union (mostly in Spain) in 2006.

The purity of amphetamine samples intercepted in Europe in 2006 varied considerably and to such an extent that any comment on typical values must be made with caution. Nevertheless, countries reporting data for 2006 can be divided into two groups, with 10 countries reporting values of between 2% and 10% and the others reporting higher purity levels (25–47%). This latter group typically included those countries known for having greater involvement with the production, trafficking or consumption of amphetamine (Netherlands, Poland, Baltic and Nordic countries). Over the past five years, the purity of amphetamine has been stable or falling in most of those 19 countries where sufficient data are available to allow an analysis.

In 2006, the typical retail price of amphetamine varied between EUR 10 and EUR 15 a gram in half of the reporting countries. Over the period 2001–06, with the exception of the Czech Republic, Spain and Romania, the retail price of amphetamine was reported to have fallen in all 16 countries reporting sufficient data for analysis.

Methamphetamine

Production of methamphetamine is concentrated in North America and east and south-east Asia. In 2006, global production of methamphetamine was estimated at 266 tonnes, exceeding that of any of other illicit synthetic drug. About 15.8 tonnes of methamphetamine was recovered worldwide in 2006, most of which was seized in east and south-east Asia, followed by North America, and less than 1% of seizures originating from Europe (UNODC, 2007a, 2008).

International action against the manufacture and diversion of synthetic drug precursors

Law enforcement efforts increasingly target the precursor chemicals necessary for illicit drug production as an additional counter-measure, and this area is one in which international cooperation is particularly valuable. Project Prism is an 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 and the reporting of shipments stopped and seizures made when suspicious transactions occur. Information on activities in this area are reported to the International Narcotics Control Board (INCB, 2008b).

Globally, reports suggest that over 11 tonnes of ephedrine and pseudo-ephedrine, key precursors of methamphetamine, were seized in 2006. China accounted for around half of this total followed by Canada and Myanmar. EU Member States (mainly Belgium and Hungary) together with the Russian Federation and Ukraine accounted for only 0.3 tonnes, although Europol (2008) reports a recent increase in the exportation, transshipment and diversion of these chemicals in the European Union.

Global seizures of 1-phenyl-2-propanone (P-2-P), which can be used for the illicit manufacture of both amphetamine and methamphetamine, declined in 2006. An exception to this trend was the EU Member States (mainly Denmark, Netherlands, Poland) along with Turkey and the Russian Federation, which together accounted for most of the global seizures of 2 600 litres of P-2-P. This precursor is predominantly used for amphetamine production in Europe with manufacturers typically sourcing P-2-P from Asian countries (China), although since 2004 it has also reported to have been sourced and trafficked from the Russian Federation (Europol, 2007a).

Global seizures of 3,4-methylenedioxyphenyl-2-propanone (3,4-MDP-2-P), used to manufacture MDMA, decreased in 2006 to 7 500 litres, of which Canada accounted for all except 105 litres seized by the Netherlands. Seizures of safrole, which may replace 3,4-MDP-2-P in the synthesis of MDMA, remained marginal in 2006, with 62 litres seized worldwide, mostly in Australia; in Europe, only France reported a seizure of safrole (7 litres).

⁽⁶³⁾ The data on European drug seizures mentioned in this chapter can be found in Tables SZR-11 to SZR-18 in the 2008 statistical bulletin. Note that where data for 2006 are absent, the corresponding data for 2005 are used to estimate European totals.

Illicit production of methamphetamine does occur in Europe, though it is largely limited to the Czech Republic, where over 400 small-scale 'kitchen laboratories' were detected in 2006. The drug is also reported to be produced in Slovakia and, to a lesser extent, Lithuania (INCB, 2008a).

About 3 000 seizures of methamphetamine amounting to 154 kg of the drug were reported in 17 European countries in 2006. Norway accounts for most seizures and amounts recovered, followed by Sweden, the Czech Republic and Slovakia. In the latter two countries, seizures tended to be small, usually of a few grams or less. Between 2001 and 2006, both the number and the quantity of methamphetamine seized in Europe have been increasing; though still remaining low in comparison to other drugs. In 2006, the limited data available suggest that the typical purity of methamphetamine fell somewhere between 20% and 55%.

Ecstasy

Global ecstasy production is reported by the UNODC (2007a) to have fallen to around 102 tonnes in 2006. Production appears to have become more geographically diffuse, with manufacture for local consumption now more common in North America and east and south-east Asia. Despite this, Europe remains the main location for ecstasy production, with manufacture concentrated in the Netherlands (where, after a few years of decline, production may have increased again in 2006), Belgium and, to a lesser extent, Poland and the United Kingdom.

The relative importance of Europe as both a consumer and producer of ecstasy can be seen from the data on drug seizures. Europe reported over 20 000 seizures resulting in the interception of nearly 14 million ecstasy tablets in 2006. The Netherlands accounted for the largest quantity of ecstasy seized (4.1 million tablets), followed by the United Kingdom, Turkey, France and Germany. Overall, the number of ecstasy seizures has decreased over the period 2001–06, and the quantity seized has also declined, after a peak year in 2002 ⁽⁶⁴⁾. Of the 4.5 tonnes of ecstasy seized worldwide in 2006, western and central Europe accounted for 43%; as a point of comparison, North America accounted for 34% (UNODC, 2008).

In Europe, most ecstasy tablets analysed in 2006 contained MDMA or another ecstasy-like substance (MDEA, MDA) as the only psychoactive substance present, with 17 countries reporting that this was the case in over 70% of the total number of tablets analysed. Spain and Poland were exceptions, reporting that the analysis of tablets

marketed as ecstasy frequently found amphetamine or methamphetamine to be present, often in combination with MDMA or one of its analogues. In Latvia and Malta, most tablets analysed did not contain any controlled substance.

Most countries reported that the typical MDMA content of ecstasy tablets was somewhere between 25 and 65 mg — although there was considerable variation in the samples analysed (9–90 mg). In addition, high-dose ecstasy tablets containing over 130 mg of MDMA were reported by some countries (Belgium, Denmark, Germany, France, Netherlands, Norway) and high-quality MDMA powder has now become available in some markets. No clear medium-term trend is observable in the MDMA content of ecstasy tablets. It is clear, however, that in comparison to when the drug first became widely available in Europe in the early 1990s, ecstasy has become considerably cheaper. Although there are some reports of tablets being sold for as little as EUR 1, most countries now report typical retail prices in the range of EUR 3–9 per tablet, and the data available for 2001–06 suggest that the retail price (adjusted for inflation) has continued to fall.

LSD

LSD use and trafficking is still considered marginal, although seizures in Europe are possibly suggestive of a revival in interest in the drug in the last few years. After a long-term downward trend dating back to the 1990s, both the number and the quantity of seizures have been increasing since 2003. The current situation is unclear, as although the data provisionally available indicates a slight decline in both measures, the United Kingdom, the country that usually reports the greatest quantities of LSD seized, has not yet reported. LSD retail prices (adjusted for inflation) have been slightly declining since 2001, and ranged in 2006 between EUR 5 and EUR 11 per unit in most European countries.

Prevalence and patterns of use

Among EU Member States, use of amphetamines or ecstasy is relatively high in: the Czech Republic, Estonia and the United Kingdom; and relatively high, in respect to the overall national drug situation, in some central and northern European countries. In contrast, overall, consumption levels of synthetic hallucinogenic drugs such as lysergic acid diethylamide (LSD) are lower and have been largely stable for a considerable period.

Higher prevalence levels in some countries need to be understood in the context of, in simple terms at least, two distinct consumption patterns. In a limited number of

⁽⁶⁴⁾ This picture is preliminary as data for the United Kingdom, the country reporting the most seizures in 2005, are not yet available for 2006.

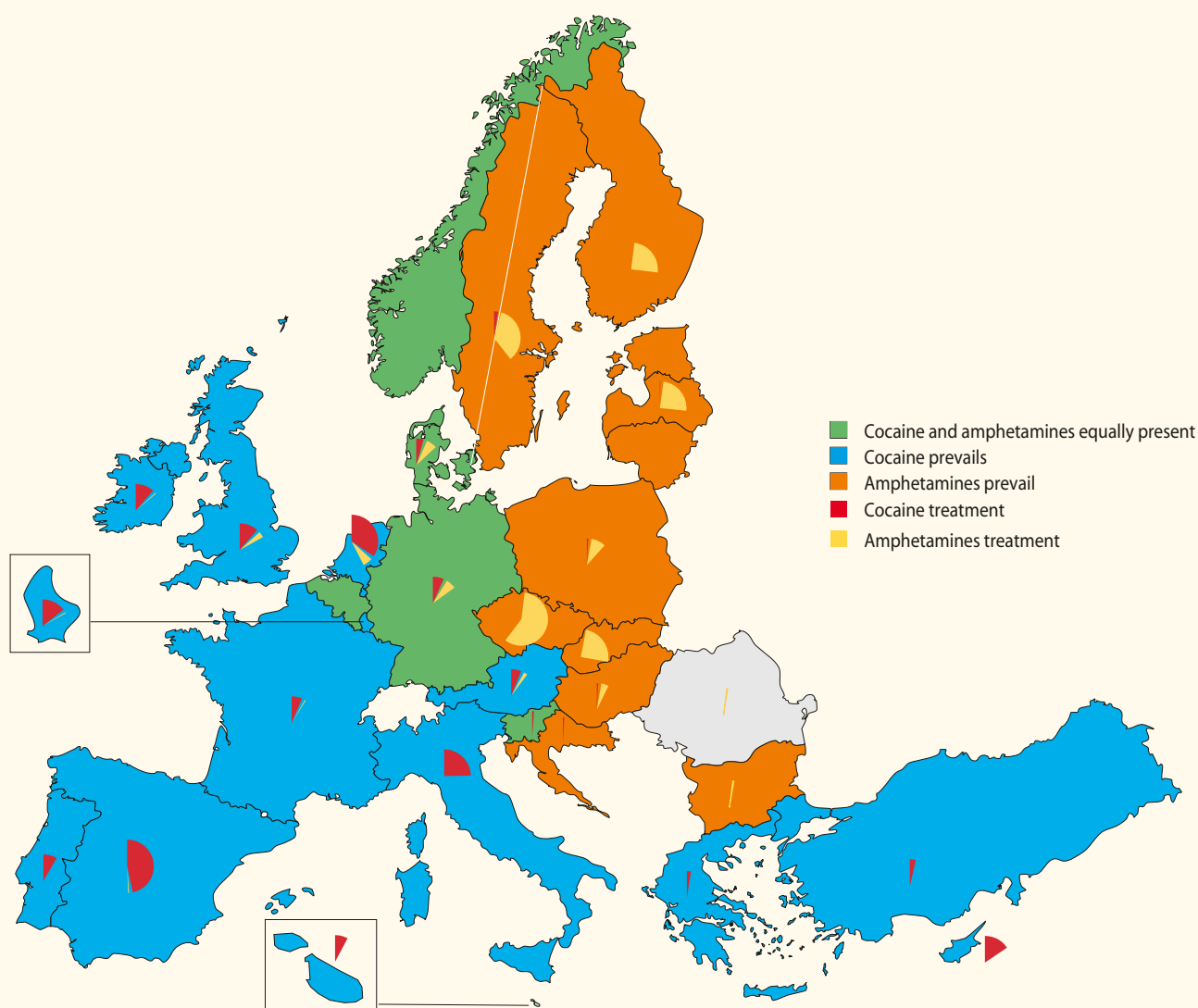
The European stimulant market: 'cocaine countries' and 'amphetamines countries'?

A synthesis of information from a variety of sources suggests that different stimulant drugs may play a similar role in different countries and, therefore, it may be wise when developing policy in this area to consider not only the individual substances but also the stimulant market as a whole. In some countries, cocaine appears to be the dominant stimulant drug, while in others, amphetamine or methamphetamine appear more commonly used. The picture that emerges from combining

data from general population surveys and reports of seizures suggests that northern and central European countries generally tend to belong to an 'amphetamines group', while in the countries in the west and south of Europe, cocaine use largely predominates.

The relative importance of stimulants in the overall drug problem also varies greatly between countries. This can be seen in treatment data where, for a restricted group of

Stimulant markets in Europe: the relative prevalence of cocaine or amphetamines in seizures and population surveys, and the proportion of drug users in treatment reporting these substances as primary drugs



countries, stimulant drugs are responsible for a relatively high proportion of all demands for drug treatment (methamphetamine in the Czech Republic and Slovakia; amphetamine in Latvia, Sweden and Finland; and cocaine in Spain, Italy and the Netherlands); while elsewhere, the proportion of treatment clients reporting any of these substances as their main reason for seeking help is very low, and sometimes even negligible.

Data from treatment clients also suggests that those being treated for problems caused by stimulant drugs tend to be experiencing problems with only one class of stimulants. For example, among those receiving treatment for cocaine in outpatient settings (all demands), only around 8 % reported amphetamines as their secondary drug; while among amphetamine clients, less than 9 % reported cocaine as a secondary problem drug. Moreover, reports from some countries suggest that one stimulant can sometimes displace another on the drugs market. For example, data exists to suggest that: cocaine may be replacing amphetamines and ecstasy among some drug-using populations; and, in the Netherlands, amphetamines may be used as a cheaper substitute for cocaine outside of urban areas.

While stimulant drugs may differ in their effects and consequences, in respect to drug treatment the options, rates of retention and outcomes are broadly similar (Rawson et al., 2000; Copeland and Sorensen, 2001).

To some extent, similarities can also be seen in patterns by which these drugs are used and in the overall typology of users. For example, recreational and less intensive and damaging patterns of use among socially well-integrated users can coexist with intensive use among more marginalised groups, with greater association with dependence problems and more risky modes of administration, such as injection and smoking.

NB: The background colour indicates the relative dominance of cocaine or amphetamines according to general population surveys (prevalence of use in the last year among the population aged 15–34) and data on seizures; pie charts represent the proportions of all drug treatment requests accounted for by these two drugs — only segments representing cocaine and amphetamines are displayed. For Italy, the Netherlands and Poland, where data on seizures were unavailable, only data from population surveys were used. For Croatia, only seizures data were used. For Norway and Belgium treatment data were unavailable. The data available for Romania did not permit inferences to be made for the country as a whole. In the Czech Republic and Slovakia, methamphetamine is the amphetamine most commonly used.

countries, the use, often by injection, of amphetamine or methamphetamine accounts for a substantial proportion of the overall number of problem drug users and those seeking help for drug problems. In contrast to these chronic populations, a more general association exists between synthetic drugs, ecstasy in particular, and nightclubs, dance music and some sub-cultures; this results in significantly higher levels of use being reported among young people, compared with the general population, and exceedingly high levels of use being found in some settings or specific sub-populations.

Amphetamines

Recent population surveys indicate that lifetime prevalence of the use of amphetamines ⁽⁶⁵⁾ in Europe varies between countries, from 0.1 % to 11.9 % of all adults (15–64 years). On average, 3.3 % of all European adults report having used amphetamines at least once. Use of the drug in the last year is much lower, with a European average of 0.6 % (range 0.0–1.3 %). The estimates suggest that around 11 million Europeans have tried amphetamines, and about 2 million have used the drug in the last year (see Table 3 for a summary of the data).

Among young adults (15–34 years), lifetime prevalence of amphetamine use varies considerably between countries, from 0.2 % to 16.5 %, with a European average of about 5 %. Last year use of amphetamines in this age group ranges from 0.1 % to 2.9 %, with the majority of countries reporting prevalence estimates of between 0.7 % and 1.9 %. It is estimated that, on average, 1.3 % of young Europeans have used amphetamines in the last year.

Problem amphetamine use

The EMCDDA indicator on problem drug use (PDU) can be used in a restricted sense for amphetamines, where it defines as such the injecting or long duration/regular use of the substance. Only one Member State (Finland) has provided a recent national estimate of problem amphetamine use, which in 2005 was estimated to amount to between 12 000 and 22 000 problem amphetamine users (4.3 to 7.9 cases per 1 000, aged 15–54 years), about four times the estimated number of problem opioid users in the country.

The number of reported treatment demands relating to the use of amphetamine is relatively small in most European countries. Treatment for the use of amphetamine accounts for a sizeable proportion of the overall reported

⁽⁶⁵⁾ Survey data on ‘amphetamine use’ often do not distinguish between amphetamine and methamphetamine, though, typically this will be related to the use of amphetamine (sulphate or dexamphetamine), as use of methamphetamine is uncommon in Europe, with less than 1 % of world methamphetamine seizures reported from this continent.

treatment demand in Latvia, Sweden and Finland, where between 25 % and 35 % of drug clients entering treatment reported amphetamine as their primary drug problem. Other than in these countries, treatment for amphetamine accounts for more than 5 % of reported drug treatment only in Denmark, Germany, the Netherlands and Poland, where between 6 % and 9 % of users in treatment report amphetamine as their primary drug ⁽⁶⁶⁾.

In most countries, though not in Sweden and Finland, the proportion of new clients entering treatment for primary amphetamine use is greater than the proportion of all clients receiving treatment for this drug. From 2002 to 2006, the proportion of new clients entering treatment for primary amphetamine use has been relatively stable in Europe as a whole, though over this period an increase has

been reported by Latvia and Denmark, while in Sweden and Finland the percentage of new amphetamine clients declined, possibly suggesting an ageing population ⁽⁶⁷⁾.

Amphetamine users entering treatment are, on average, around 29 years old and male. Although the male to female ratio is around 2:1, the overall proportion of females among amphetamine clients is higher than that found for other drugs ⁽⁶⁸⁾.

Problem methamphetamine use

In contrast to other parts of the world, where the use of methamphetamine has increased in recent years, levels of its use in Europe appear limited (Griffiths et al., 2008). Historically, use of this drug in Europe has been concentrated in the Czech Republic and, to some extent,

Table 3: Prevalence of amphetamines use in the general population — summary of the data

Age group	Time frame of use	
	Lifetime	Last year
15–64 years		
Estimated number of users in Europe	11 million	2 million
European average	3.3 %	0.6 %
Range	0.1–11.9 %	0.0–1.3 %
Lowest-prevalence countries	Greece (0.1 %) Romania (0.2 %) Malta (0.4 %) Cyprus (0.8 %)	Greece, Malta (0.0 %) France (0.1 %) Portugal (0.2 %)
Highest-prevalence countries	United Kingdom (11.9 %) Denmark (6.9 %) Norway (3.6 %) Ireland (3.5 %)	United Kingdom, Estonia (1.3 %) Norway, Latvia (1.1 %)
15–34 years		
Estimated number of users in Europe	7 million	2 million
European average	5.1 %	1.3 %
Range	0.2–16.5 %	0.1–2.9 %
Lowest-prevalence countries	Greece (0.2 %) Romania (0.5 %) Malta (0.7 %) Cyprus (0.8 %)	Greece (0.1 %) France (0.2 %) Cyprus (0.3 %) Portugal (0.4 %)
Highest-prevalence countries	United Kingdom (16.5 %) Denmark (12.7 %) Norway (5.9 %) Spain, Latvia (5.3 %)	Estonia (2.9 %) United Kingdom (2.7 %) Latvia (2.4 %) Denmark (2.2 %)
Information based on the last survey available for each country. The study year ranges from 2001 to 2007. The average prevalence for Europe was computed by a weighted average according to the population of the relevant age group in each country. In countries for which no information was available, the average EU prevalence was imputed. Populations used as basis: 15–64 (328 million), 15–34 (134 million) and 15–24 (64 million). The data summarised here are available under 'General population surveys' in the 2008 statistical bulletin.		

⁽⁶⁶⁾ See Table TDI-5 (part ii) in the 2008 statistical bulletin.

⁽⁶⁷⁾ See Figure TDI-1 and Tables TDI-4 (part ii), TDI-5 (part ii) and TDI-36 in the 2008 statistical bulletin.

⁽⁶⁸⁾ See Table TDI-37 in the 2008 statistical bulletin.

Slovakia. Only these two countries report recent estimates of problem use. In 2006, in the Czech Republic there were estimated to be approximately 17 500–22 500 methamphetamine users (2.4 to 3.1 cases per 1 000 aged 15–64 years), almost twice the estimated number of problem opioid users; and in Slovakia, approximately 6 200–15 500 methamphetamine users (1.6 to 4.0 cases per 1 000 aged 15–64 years), around 20 % fewer than the estimated number of problem opioid users.

In the last five years, the reported demand for treatment related to methamphetamine use has been increasing in both countries. Methamphetamine has become the primary drug most often reported by those requesting treatment for the first time in Slovakia, where it accounts for 25 % of all drug treatment requests. In the Czech Republic, 59 % of all drug treatment clients report methamphetamine as their primary drug ⁽⁶⁹⁾. Clients in treatment for methamphetamine report high rates of injecting drug use: around 50 % in Slovakia and 80 % in the Czech Republic.

Ecstasy

It is estimated that about 9.5 million European adults have tried ecstasy (3 % on average) and that about 3 million (0.8 %) have used it in the last year (see Table 4 for a summary of the data). Considerable variation exists between countries, with recent surveys suggesting that between 0.3 % and 7.3 % of all adults (15–64 years) have ever tried the drug, and with most countries reporting lifetime prevalence estimates in the range 1.3–3.1 %. Use of the drug in the last year varied across Europe, from 0.2 % to 3.5 %. On all measures, and as with most other illicit drugs, reported use was far higher among males than among females.

Ecstasy consumption was more common among young adults (15–34 years), where lifetime prevalence estimates ranged at national level from 0.5 % to 14.6 %, with between 0.4 % and 7.7 % of this age group reporting using the drug in the last year. It is estimated that 7.5 million young Europeans (5.6 %) have ever tried ecstasy, with around 2.5 million (1.8 %) reporting use in the last year. Estimates of prevalence are higher still if attention is restricted to a younger age band: among the 15–24 age group, lifetime prevalence ranges from 0.4 % to 18.7 %, though most countries reported estimates in the 2.5–8 % range ⁽⁷⁰⁾. Although most countries reported estimates of 1.3–4.6 % for use in the last year by this age group, there was a considerable difference between the lowest national

estimate at 0.3 % and the highest at 12 %, reflecting the different experiences of some Member States.

Among school students, large increases in prevalence levels may occur with small increases in age, for example data available from 16 countries show that, compared to younger students, lifetime prevalence of ecstasy use among 17- to 18-year-old school students is generally considerably higher, suggesting that first use of the drug commonly takes place after the age of 16 ⁽⁷¹⁾.

Despite the number of ecstasy users in Europe being similar to that of amphetamine, very few are seen by treatment services. In 2006, in most countries, less than 1 % of drug users entering treatment mentioned ecstasy as their primary problem drug and in most countries only a trivial number of clients are being treated for ecstasy-related problems. Only five countries report having more than 100 ecstasy clients entering treatment (France, Italy, Hungary, United Kingdom, Turkey), representing between 0.5 % and 4 % of all drug clients in these countries. With an average age of 24–25 years, users of ecstasy are among the youngest groups entering drug treatment and regularly report the concomitant use of other substances, including cannabis, cocaine, alcohol and amphetamines ⁽⁷²⁾.

LSD

Lifetime prevalence of LSD use among the adult population (15–64 years) ranges from almost zero to 5.4 %. Among young adults (15–34 years), lifetime prevalence estimates are a little higher (0.3 % to 7.1 %), although lower prevalence levels are reported among the 15- to 24-year-olds. In contrast, in the few countries providing comparable data, the use of LSD is often exceeded by that of hallucinogenic mushrooms, where lifetime prevalence estimates for young adults range from 1 % to 9 %, and last year prevalence estimates between 0.3 % and 3 % (EMCDDA, 2006).

Trends in the use of amphetamines and ecstasy

Reports of stabilising or even decreasing trends in amphetamine and ecstasy consumption in Europe are supported by the most recent data. After general increases in the 1990s, population surveys now point to an overall stabilisation, or even moderate decrease, in the popularity of both drugs, although this pattern is not seen in all countries.

Amphetamine use (last 12 months) among young adults (15–34) in the United Kingdom declined substantially between 1996 (6.5 %) and 2002 (3.1 %), with the figures remaining

⁽⁶⁹⁾ See Table TDI-5 (part ii) in the 2008 statistical bulletin.

⁽⁷⁰⁾ See Table GPS-17 in the 2008 statistical bulletin.

⁽⁷¹⁾ See Tables EYE-1 and EYE-2 in the 2008 statistical bulletin.

⁽⁷²⁾ See Tables TDI-5 and TDI-37 (part i), (part ii) and (part iii) in the 2008 statistical bulletin.

Table 4: Prevalence of ecstasy use in the general population — summary of the data

Age group	Time frame of use	
	Lifetime	Last year
15–64 years		
Estimated number of users in Europe	9.5 million	2.6 million
European average	2.8%	0.8%
Range	0.3–7.3%	0.2–3.5%
Lowest-prevalence countries	Romania (0.3%) Greece (0.4%) Malta (0.7%) Lithuania (1.0%)	Greece, Malta (0.2%) Denmark, Poland (0.3%)
Highest-prevalence countries	United Kingdom (7.3%) Czech Republic (7.1%) Ireland (5.4%) Spain (4.4%)	Czech Republic (3.5%) United Kingdom (1.8%) Estonia (1.7%) Slovakia (1.6%)
15–34 years		
Estimated number of users in Europe	7.5 million	2.5 million
European average	5.6%	1.8%
Range	0.5–14.6%	0.4–7.7%
Lowest-prevalence countries	Romania (0.5%) Greece (0.6%) Malta (1.4%) Lithuania, Poland (2.1%)	Greece (0.4%) Italy, Poland (0.7%) Denmark, Lithuania, Portugal (0.9%)
Highest-prevalence countries	Czech Republic (14.6%) United Kingdom (13.0%) Ireland (9.0%) Slovakia (8.4%)	Czech Republic (7.7%) United Kingdom (3.9%) Estonia (3.7%) Netherlands, Slovakia (2.7%)
Information based on the last survey available for each country. The study year ranges from 2001 to 2007. The average prevalence for Europe was computed by a weighted average according to the population of the relevant age group in each country. In countries for which no information was available, the average EU prevalence was imputed. Populations used as basis: 15–64 (328 million), 15–34 (134 million) and 15–24 (64 million). The data summarised here are available under 'General population surveys' in the 2008 statistical bulletin.		

stable thereafter. A marked increase in amphetamine use is reported in Denmark between 1994 and 2000, but the results of the 2005 survey indicate a decrease in the use of this substance since the beginning of this decade ⁽⁷³⁾. Among the other countries reporting repeated surveys over a similar time span (Germany, Greece, Spain, France, Netherlands, Slovakia, Finland), the trends are largely stable ⁽⁷⁴⁾. During the five-year period 2001–06, of the 14 countries with sufficient data on last year prevalence of amphetamine use among the 15–34 age group, three report a decrease of 15% or more, four report stabilisation and seven report an increase of 15% or more.

For ecstasy use among young adults (15–34), the picture is more mixed, with levels of use still high among young

males ⁽⁷⁵⁾ and in studies of some specific recreational settings. After general increases in use in some European countries in the late 1980s and early 1990s, leading to similar levels of ecstasy use in Germany, Spain and the United Kingdom in the mid-1990s, last year prevalence of use has remained consistently higher in the United Kingdom compared to the other countries ⁽⁷⁶⁾. Over the five-year period, 2001–06, last year prevalence of ecstasy use among young adults decreased in three of the 14 countries providing sufficient information, while it remained stable in five countries and increased in six.

Data from a few countries suggest that cocaine could be replacing amphetamines and ecstasy among some sectors of the drug-using population. This may be the

⁽⁷³⁾ In Denmark in 1994 the information refers to 'hard drugs', which was considered mainly amphetamines.

⁽⁷⁴⁾ See Figure GPS-8 in the 2008 statistical bulletin.

⁽⁷⁵⁾ See Figure GPS-9 (part ii) in the 2008 statistical bulletin.

⁽⁷⁶⁾ See Figure GPS-21 in the 2008 statistical bulletin.

case in the United Kingdom and Denmark, and to some extent in Spain. Both the United Kingdom and Denmark report relatively high lifetime prevalence estimates for the use of amphetamines at 11.9% and 6.9% respectively, but levels of reported use in the last year and last month are more in line with those found in other countries. Increases in cocaine consumption in these countries have been matched to some extent by a decrease in the use of amphetamines, raising the possibility that one stimulant drug is replacing another in these markets ⁽⁷⁷⁾. Possible changes in the patterns of drug use in other countries (Germany, France, Italy, Netherlands) are less clear. Overall, the interplay between different drugs that may have similar appeal to users remains poorly understood.

An analysis of data from those national school surveys newly available in 2007 (Czech Republic, Spain, Portugal, Slovakia, Sweden, United Kingdom) supports the suggestion of an overall stabilisation in the situation with no change or even some decrease noted in reported lifetime use of both amphetamine and ecstasy.

Recreational settings

Use of amphetamines and ecstasy in recreational settings

Studies of drug use in selected recreational settings where young people congregate and which are known to be sometimes associated with drug use, such as dance events or music festivals, can provide a useful window on the behaviour of those using amphetamines and ecstasy on a regular and intensive basis. Estimates of drug use in these settings are typically high, but are not generalisable to the wider population.

A study of young people aged 15–30, who regularly go out in nightlife settings, carried out in 2006 in nine European cities (Athens, Berlin, Brno, Lisbon, Liverpool, Ljubljana, Palma, Venice, Vienna) reported lifetime prevalence estimates of 27% for ecstasy use and 17% for amphetamine. Frequent use of these drugs was much lower, with only 1.4% of the respondents reporting that they used ecstasy once a week or more often and less than 1% that this was the case for amphetamine. The mean age at first use for both drugs among the study group was 18 years ⁽⁷⁸⁾. Concomitant alcohol use was common, with 34% of those interviewed reporting having been 'drunk' more than twice during the four weeks before interview. This level of drunkenness was more commonly

reported by males than females: 42% and 27%, respectively (European Commission, 2007b).

A French survey carried out in 2004 and 2005 at five electronic music venues reported last month prevalence of 32% for ecstasy and 13% for amphetamine among a sample of 1 496 respondents. However, it should be noted that prevalence was higher among specific sub-populations that were characterised by their counter-cultural elements and labelled as 'alternative'. Among these sub-populations, prevalence estimates for ecstasy and amphetamine were 54% and 29% respectively.

Interventions in recreational settings

An increasingly common trend reported in Europe is for authorities to address aspects of licit and illicit drugs collectively when considering local public order or health issues. This approach is particularly relevant to interventions targeting settings where both synthetic and stimulant drugs and alcohol are consumed, such as night bars and clubs. One of the problems in this area is that the relative roles of illicit and licit substances may be difficult to distinguish. The use of alcohol among young people is a growing area of concern in Europe, and in 2006 the European Commission adopted an EU alcohol strategy to support Member States in reducing alcohol-related harm among young people. Indeed, harmful use of alcohol is associated with one in every four deaths among young men (aged 15–29) and one in 10 among young women ⁽⁷⁹⁾.

Concerns about the combined use of drugs and alcohol by young people in public settings have led to the development of strategies that aim to alter the social, economic and physical environments associated with alcohol and drug consumption, with the goals of: modifying consumption behaviours and norms; creating conditions less favourable to intoxication; and reducing opportunities for alcohol and drug-related problems to occur ⁽⁸⁰⁾. A number of measures are reported by Member States to take place in, or around, nightlife settings with the specific aim of reducing harm or positively modifying the social environment. These include: training for bar and security staff; increased enforcement of existing legislation; raising awareness of substance-related harms; provision of late-night transport services; and improvements intended to provide a safer nightlife environment. Measures in this area are diverse, including such things as: improvements to street lighting; the availability of drinking water; proper ventilation; or even measures to provide a rapid response

⁽⁷⁷⁾ See 'The European stimulant market: "cocaine countries" and "amphetamine countries"?', p. 50.

⁽⁷⁸⁾ See Table EYE-2 in the 2008 statistical bulletin.

⁽⁷⁹⁾ http://ec.europa.eu/health/ph_determinants/life_style/alcohol/documents/alcohol_factsheet_en.pdf

⁽⁸⁰⁾ <http://www.emcdda.europa.eu/themes/prevention/environmental-strategies>

to medical emergencies. Often, a common feature of this approach is that it is based upon a dialogue between different stakeholders, such as the police, licensing authorities, club owners and healthcare providers, who are required to work together in partnership to identify both local needs and possible solutions.

An example of work in this area can be found in Denmark where, in cooperation with municipal authorities and the police, restaurant owners and people working in the nightlife environment are offered courses to promote shared attitudes on limiting the use and sale of drugs and alcohol. Some approaches in this area developed by individual Member States are also beginning to attract wider attention, as illustrated by the fact that the safe-dance guidelines developed in the United Kingdom have now been implemented in clubs in both Paris and Brussels. Club owners, with the participation of outreach workers and local authorities, help promote moderate drinking, raising awareness of the harms of drugs and alcohol, while raising the safety characteristics of settings (e.g. providing free water, staff trained in first aid, chill-out areas).

The relationship between driving and drug and alcohol consumption has been an issue included in some environmental strategies. Examples here include the provision of alternative transportation for intoxicated drivers, which is available in some Parisian nightclubs, and the promotion of public transport options by clubs in Brussels. In Spain, prevention campaigns that focus on 'designated drivers' and on raising awareness of the risks of driving under the influence of psychoactive substances have been conducted, particularly during weekends. These campaigns may have contributed to the 16% decrease observed in Spain in the number of traffic accidents involving young people aged 18–20, in 2006 ⁽⁸¹⁾.

Strategies that address the environment in which young people consume both drugs and alcohol appear to have considerable potential for safeguarding public health and

improving public safety, with benefits that can extend beyond those using drugs and into the wider community. However, today in Europe, such approaches tend to be limited to particular known problem areas, often in major city centres, and are rarely comprehensively implemented, strongly suggesting that there is considerable potential for further investment and development in this area. More generally, the focus of work in this area has tended to be restricted to interventions targeting specific problematic behaviours, or aspects of the environment, rather than the broader task of addressing the normative beliefs and attitudes that young people have towards the use of drugs and alcohol in specific settings.

Treatment provision

In most Member States, limited demand is reflected in the limited availability of treatment services specifically targeting users of amphetamine, methamphetamine or ecstasy. This situation is somewhat different in a few Member States with long-established chronic amphetamine- or methamphetamine-using populations. In these countries (principally the Czech Republic, Slovakia, Finland, Sweden), users of amphetamine or methamphetamine are treated within specialist services. Treatment options appear to consist of detoxification, followed by individual therapy in an outpatient setting or group therapy in either outpatient or residential settings.

Therapeutic options with robust evidence of effectiveness are generally lacking to guide the treatment of dependence on psychostimulants, such as amphetamines and cocaine. As noted in Chapter 5, no pharmacological agents are currently available to help users to manage abstinence or reduce the cravings associated with psychostimulant dependence. Furthermore, the literature would suggest that no particular psychosocial intervention has shown strong evidence of effectiveness in helping psychostimulant users to maintain abstinence.

⁽⁸¹⁾ For more information on prevention campaigns across Europe, see the 2007 selected issue on drugs and driving.



Chapter 5

Cocaine and crack cocaine

Introduction

The most recent data continues to point to an overall increase in the use of cocaine in Europe. Population surveys carried out in a number of countries have recorded a marked increase in use among young people since the mid-1990s. These findings are supported by the results of targeted studies, which have observed very high levels of cocaine use in some recreational settings (nightlife and dance-music venues). In parallel, indicators of cocaine availability in Europe, including the number of seizures of the drug and the amount seized, have increased dramatically.

In some EU Member States, the demand for treatment for cocaine use has increased substantially in recent years, and now even exceeds that for opioid treatment in some countries, cities and regions. Moreover, a substantial proportion of opioid users in treatment report cocaine as their secondary drug, which may be contributing to their problems and can complicate their care. In many countries, cocaine is also reported in the toxicological analysis of a high proportion of drug-related deaths, generally in combination with opioids and other substances.

The existence of considerable differences between countries, with many countries still reporting very low levels of use, is an important caveat to the observation that, overall, cocaine use is increasing in Europe. National experiences of cocaine problems are also very mixed; with, for example, a relatively small number of countries accounting for the majority of all cocaine treatment demands reported in Europe.

Supply and availability

Production and trafficking

Cultivation of coca bush, the source of cocaine, continues to be concentrated in a few countries in the Andean region ⁽⁸²⁾. The United Nations Office on Drugs and Crime (2008) estimated potential cocaine production at

994 tonnes of pure cocaine hydrochloride for the year 2007, of which Colombia accounted for 61 %, Peru 29 % and Bolivia 10 %. Analysis of the number of laboratories dismantled suggests that most production remains located in these three countries, although it may also occur in other South American countries, before exportation to the main consumer markets in North America and Europe. Information on illicit trafficking in potassium permanganate (a chemical reagent used in the synthesis of cocaine hydrochloride) supports this finding, with Colombia reporting 99 of the 101 tonnes of permanganate potassium seized globally in 2006 (INCB, 2008b).

Cocaine produced in the Andean region is then smuggled to Europe from South American countries (via Brazil, Ecuador, Venezuela). While the Caribbean continues to be an important transit zone for cocaine heading to Europe, transshipment via countries in west Africa, in particular in the Gulf of Guinea and off the coasts of Cape Verde, Guinea and Guinea-Bissau, has been increasing markedly during the past few years (CND, 2008; INCB, 2008a) ⁽⁸³⁾. Spain and Portugal remain the major entry points of cocaine into Europe, the latter's role having substantially increased since 2005. Cocaine continues, however, also to enter Europe more directly either by shipment across the Atlantic or by air; in particular to the Netherlands, Belgium, Italy, France, the United Kingdom and Germany. Both the Netherlands and France are reported to be major transit countries for further cocaine distribution in Europe (Europol, 2007b). Recent reports of cocaine importation via east European countries (Bulgaria, Estonia, Latvia, Lithuania, Romania, Russia) may point to the development of new trafficking routes in this part of Europe.

Seizures

Cocaine is the most trafficked drug in the world after herbal cannabis and cannabis resin. In 2006, global seizures of cocaine decreased slightly to 706 tonnes. South America continued to report the largest amount seized, accounting for 45 % of the global figure, followed by North America with 24 %, and west and central Europe with 17 % (UNODC, 2008).

⁽⁸²⁾ For information on the sources of data for drug supply and availability, see p. 36.

⁽⁸³⁾ See also 'West Africa: now a regional transit hub for trafficking to Europe', p. 59.

West Africa: now a regional transit hub for trafficking to Europe

In the last five years, west Africa has emerged as an important region in cocaine trafficking to Europe (¹), acting as a site of transit, storage and repackaging (Europol, 2007b; UNODC 2007b; USDS, 2008). It is estimated that almost a quarter of the cocaine trafficked to Europe in 2007 was transited via this region (UNODC, 2008). Against a background of increasing cocaine use in Europe, the growth in trafficking via the west African route is thought to have contributed to the decline in the price of the drug, while reinforcing the role of the Iberian peninsula as an entry point for cocaine distribution in Europe (Europol, 2007b).

Cocaine is trafficked from west Africa to Europe mainly by sea, with large shipments transported by fishing vessels to unloading sites mainly on the coast of northern Portugal and Galicia in Spain. Smaller shipments of cocaine are trafficked by air or overland, increasingly associated with smuggling cannabis resin from north Africa.

The growth of the west African cocaine trafficking route has been attributed to several factors. These include more effective controls on alternative trafficking routes (Europol, 2007b); the geographical position of west Africa; and the economic vulnerabilities of countries in this area, often resulting in weak judicial and law enforcement systems.

The international community has launched several initiatives to address the problem. Among other initiatives taken by the European Union, the Council, through the horizontal working party on drugs, has placed west Africa at the top of the agenda and presented a resolution on the strengthening of international support to west Africa to the 2008 UN Commission on Narcotic Drugs. Furthermore, seven Member States, with EU support, have acted together to establish the Maritime Analysis and Operations Centre–Narcotics (MAOC-N), a law enforcement centre, located in Lisbon, with military support, that aims to suppress cocaine trafficking, with special focus on the eastern part of the Atlantic.

(¹) UNODC (2007b) reports that Senegal, Ghana, Mauritania, Guinea-Bissau, Cape Verde, Nigeria, Benin and Sierra Leone registered the largest seizures in 2006/07.

The number of cocaine seizures has been on the increase for the last 20 years in Europe, and continued to rise during the period 2001–06, with the exception of a decrease in 2003. The quantity of cocaine seized has also been increasing over the last decade, but with regular fluctuations. In 2006, cocaine seizures in Europe increased to 72 700 cases and the quantity recovered to 121 tonnes (⁸⁴). Spain continued to be the country reporting the highest seizures, accounting for 58 % of all seizures and 41 % of the quantity intercepted in Europe that year. The huge increase in the

amount seized in Portugal since 2005, accounting for 28 % of the European total in 2006, points to the growing use of the Iberian peninsula by cocaine traffickers as an entry point to the European market.

Purity and price

The typical purity of cocaine in Europe ranged between 1 % and 90 % in 2006, although most countries reported values between 25 % and 55 % (⁸⁵). Of the 23 countries providing sufficient data, most reported a declining trend in the purity of cocaine over the period 2001–06; increases were noted, however, in Greece and France over the period 2003–06.

In 2006, the typical retail price of cocaine varied between EUR 50 and EUR 75 per gram in most European countries, although Cyprus, Romania, Sweden and Turkey reported much higher values. Over the period 2001–06, cocaine sold on the streets has become cheaper in the 18 countries reporting sufficient data, with the exception of Romania, where an increase in price (adjusted for inflation) was noted.

Prevalence and patterns of use

Diversity is not only found in the overall levels of cocaine use reported by Member States, it is also reflected in the characteristics of cocaine users themselves, who fall across a broad social continuum ranging from some of the most privileged to the most marginalised members of society. Patterns of cocaine use can be correspondingly diverse, ranging from the occasional and recreational to the highly compulsive and dependent. The form that cocaine is used in (cocaine hydrochloride or crack cocaine), and the route of administration by which it is used, are additional complicating factors. This diversity is an important consideration, both for understanding the range of problems that are likely to be associated with different patterns of cocaine use, and also for informing the targeting and development of services for a disparate group of drug users.

Among the general population

Overall, cocaine remains the second most used illicit drug in Europe, after cannabis, although use varies greatly between countries. It is estimated that around 12 million Europeans have used it at least once in their lifetime; on average 3.6 % of adults aged 15–64 years (see Table 5 for a summary of the data). National figures vary from 0.4 % to 7.7 %, with 12 countries, mostly Member States that have joined the European Union since 2004,

(⁸⁴) The data on European cocaine seizures mentioned in this chapter can be found in Tables SZR-9 and SZR-10 in the 2008 statistical bulletin. Note that across the chapter, where national data for 2006 are absent, the corresponding data for 2005 are used to estimate European totals.

(⁸⁵) See Tables PPP-3 and PPP-7 in the 2008 statistical bulletin for purity and price data.

reporting very low levels of lifetime prevalence among all adults (0.4–1.2 %).

It is estimated that around 4 million Europeans have used the drug in the last year (1.2 % on average), although again national variation between countries is considerable. This can be seen in results from recent national surveys, which report last year prevalence estimates of between 0.1 % and 3 %; though only in four countries do levels of use exceed 1 %. At 2 million, the prevalence estimate for last month use is around half that for last year prevalence, and represents about 0.5 % of the adult population. These estimates are likely to be conservative.

Overall, cocaine use appears to be concentrated in a few countries, notably Spain and the United Kingdom, and to a lesser extent Italy, Denmark and Ireland, while use of the drug is relatively low in most other European countries. In countries where amphetamines dominate the market in illicit stimulant drugs, estimates of use of cocaine are low in almost all cases; conversely, in most countries where cocaine is the main illicit stimulant, low levels of amphetamine use are reported ⁽⁸⁶⁾.

Cocaine use among young adults

Cocaine use is mainly concentrated among young adults (15–34 years). For instance, of the 4 million Europeans that have used the drug in the last year, around seven out of eight are likely to be young adults.

In Europe, it is estimated that 7.5 million young adults (15–34 years), or an average of 5.4 %, have used cocaine at least once in their life. National figures vary from 0.7 % to 12.7 %. The European average for last year use of cocaine among this age group is estimated at 2.3 % (3.5 million) and for last month use at 1 % (1.5 million).

Use is particularly high among young males (15–34 years), with last year prevalence of cocaine use between 4 % and 7 % in Spain, Denmark, Ireland, Italy and the United Kingdom ⁽⁸⁷⁾. The female to male prevalence ratio for last year use ranged between 1:1 and 1:13 for young adults in different countries. Weighted averages for the European Union as a whole suggest that, among cocaine users aged 15–34, the male to female ratio was nearly 4:1 (3.8 males for each female).

Measures of more recent cocaine use (last year and last month) are highest among the 15–24 age group, although this phenomenon is less marked than in the case of cannabis or ecstasy ⁽⁸⁸⁾. Last year prevalence of cocaine use for this age group is estimated at 2.6 %, which

Estimating cocaine use by analysing communal wastewater

The application of recent developments in analytical chemistry to the detection of cocaine in wastewater has introduced a new approach to the monitoring of illicit drug use in the community, known as 'sewage epidemiology'. The method involves measuring the levels of breakdown products of illicit drugs excreted in the urine of consumers. The levels of breakdown products measured in wastewater are then scaled up to calculate consumption of illicit drugs among the population. In the case of cocaine, the main metabolite excreted in the urine is benzoylecgonine. As breakdown in the human body of cocaine is the only likely source of benzoylecgonine in wastewater systems, with certain assumptions, it is possible to back-calculate from the amount of the metabolite in the wastewater to the amount of cocaine consumed in the community (although not to the number of consumers).

Sewage epidemiology is still in an early stage of development and, as well as important technical and ethical questions, the information it offers must be integrated into current research thinking. These issues are addressed in the new EMCDDA publication on wastewater analysis (EMCDDA, 2008b). Bringing together experts from a wide range of disciplines, the report concludes that, although further developments are required, sewage epidemiology has potential for drug surveillance at the community level. The approach could also have potential as a drug surveillance tool to assist public health and law enforcement officials in identifying patterns of drug use across municipalities of varying sizes. And, because wastewater sampling and analysis can be conducted on a daily, weekly or monthly basis, the data could potentially be used to give a more real-time measure that provides communities with more possibilities for monitoring the impact and effectiveness of prevention and intervention activities.

translates into 2 million 15- to 24-year-olds using the drug in the last year.

Cocaine use is also associated with certain lifestyles. An analysis of data from the British Crime Survey 2003/04 estimated that around 13 % of 16- to 29-year-olds who frequently visit pubs or wine bars report last year use of cocaine, compared with 3.7 % among less frequent visitors. Among 30- to 59-year-olds, the figures were 3.1 % and 1 % respectively. Reported use of crack cocaine in the same survey was very low, even among the group reporting the highest cocaine prevalence levels. This supports the findings of more focused studies, which report a different profile for the user of powder cocaine compared to that found for crack cocaine. It is likely that in other countries cocaine use is also associated with similar lifestyle factors.

⁽⁸⁶⁾ See 'The European stimulant market: "cocaine countries" and "amphetamines countries"?', p. 50.

⁽⁸⁷⁾ See Figure GPS-13 in the 2008 statistical bulletin.

⁽⁸⁸⁾ See Figure GPS-15 and Tables GPS-14 to GPS-16 for all years and Tables GPS-17 to GPS-19 for latest data in the 2008 statistical bulletin.

Table 5: Prevalence of cocaine use in the general population — summary of the data

Age group	Time frame of use		
	Lifetime	Last year	Last month
15–64 years			
Estimated number of users in Europe	12 million	4 million	2 million
European average	3.6%	1.2%	0.5%
Range	0.4–7.7%	0.1–3.0%	0–1.6%
Lowest-prevalence countries	Romania, Malta Lithuania (0.4%) Greece (0.7%)	Greece (0.1%) Poland, Latvia Czech Republic (0.2%)	Greece, Estonia, Czech Republic (0.0%) Malta, Lithuania, Poland, Finland, Latvia (0.1%)
Highest-prevalence countries	United Kingdom (7.7%) Spain (7.0%) Italy (6.6%) Ireland (5.3%)	Spain (3.0%) United Kingdom (2.6%) Italy (2.2%) Ireland (1.7%)	Spain (1.6%) United Kingdom (1.3%) Italy (0.8%) Ireland (0.5%)
15–34 years			
Estimated number of users in Europe	7.5 million	3.5 million	1.5 million
European average	5.4%	2.3%	1%
Range	0.7–12.7%	0.2–5.4%	0.0–2.8%
Lowest-prevalence countries	Romania, Lithuania (0.7%) Malta (0.9%) Greece (1.0%)	Greece (0.2%) Poland (0.3%) Latvia, Czech Republic (0.4%)	Estonia (0.0%) Greece, Poland, Latvia, Czech Republic (0.1%)
Highest-prevalence countries	United Kingdom (12.7%) Spain (9.6%) Denmark (9.1%) Ireland (8.2%)	United Kingdom (5.4%) Spain (5.2%) Italy (3.2%) Ireland (3.1%)	Spain (2.8%) United Kingdom (2.7%) Italy (1.2%) Denmark, Ireland (1.0%)
15–24 years			
Estimated number of users in Europe	3 million	2 million	800 000
European average	4.5%	2.6%	1.2%
Range	0.4–11.2%	0.2–6.1%	0.0–3.2%
Lowest-prevalence countries	Romania (0.4%) Greece (0.6%) Lithuania (0.7%) Malta, Poland (1.1%)	Greece (0.2%) Poland (0.3%) Czech Republic (0.4%) Latvia (0.6%)	Estonia (0.0%) Greece, Latvia (0.1%) Czech Republic, Poland, Portugal (0.2%)
Highest-prevalence countries	United Kingdom (11.2%) Spain (8.7%) Denmark (8.0%) Ireland (7.0%)	United Kingdom (6.1%) Spain (5.8%) Ireland (3.8%) Denmark, Italy (3.3%)	United Kingdom (3.2%) Spain (3.1%) Italy (1.3%) Bulgaria, Ireland (1.1%)

Information based on the last survey available for each country. The study year ranges from 2001 to 2007. The average prevalence for Europe was computed by a weighted average according to the population of the relevant age group in each country. In countries for which no information was available, the average EU prevalence was imputed. Populations used as basis: 15–64 (328 million), 15–34 (134 million) and 15–24 (64 million). The data summarised here are available under 'General population surveys' in the 2008 statistical bulletin.

Studies conducted in recreational settings often report a high prevalence of cocaine use. For example, a 2006 study in nine European cities (Athens, Berlin, Brno, Palma, Lisbon, Liverpool, Ljubljana, Venice, Vienna), with 1 383 young people aged 15–30 who regularly ‘go out in nightlife settings’, found that 29% reported using the drug at least once and nearly 4% that they used cocaine once a week or more at some point (European Commission, 2007b). Higher prevalence levels were also reported in a 2004–05 French survey of 1 496 individuals interviewed in five different electronic music settings. Nearly 35% of the sample had used cocaine and 6% crack or free-base cocaine during the last month. The study also reported differences between sub-populations: last month prevalence was 50% for cocaine use and 13% for crack use among those labelled ‘alternative’, while around a quarter of the more mainstream sub-populations had used cocaine and 2% crack during the last month.

Cocaine use among school students

Among school students, overall prevalence levels for cocaine use are much lower than those for cannabis use. Ever in lifetime prevalence of cocaine use among 15- to 16-year-old school students is 2% or lower in most countries, rising to 4% in Spain and 5% in the United Kingdom ⁽⁸⁹⁾. In countries that have reported recent data from national school surveys (Spain, Portugal, Slovakia, Sweden, United Kingdom), prevalence of cocaine use is stable or decreasing slightly, although changes in prevalence levels are usually too small to be statistically significant. In Spain, recent survey data have shown a significant decrease among 17- to 18-year-old school students.

Patterns of cocaine use

Data from general population surveys suggest high discontinuation rates among cocaine users: in those countries where last year prevalence is above 2%, between 80% and 90% of adults who have used cocaine at least once in their life have not used it during the last month ⁽⁹⁰⁾.

Only limited information is available on the frequency of cocaine use in Europe. An analysis of the British Crime Survey found that about 20% of those young people (16–24 years) who had used cocaine in the previous year consumed the drug more often than once a month. A multi-city European study with targeted samples of cocaine users in nine cities (Prinzleve et al., 2004) found

that the reported frequency of use was on average lower among integrated users (seven days a month) than among socially excluded users (11 days) or among opioid users in treatment (14 days).

Problem cocaine use and treatment demand

National estimates of problem cocaine use (injection or long duration/regular use) are available only for Spain and Italy, and regional estimates are available for the United Kingdom. According to the most recent data for Spain, in 2002 there were between 4.5 and 6 problem cocaine users per 1 000 adult population (15–64 years). Similarly, in Italy, in 2006, there were estimated to be between 3.7 and 4.5 problem cocaine users per 1 000 adults. Information for the United Kingdom is not directly comparable to that of Spain and Italy, as it is based on crack cocaine use. In 2004–05, one study estimated the number of problem crack cocaine users in England at 5.7 to 6.4 per 1 000 adult population.

Cocaine, mainly powder cocaine, was cited as the principal reason for entering drug treatment in Europe in 2006 by about 16% of all treatment clients, corresponding to around 61 000 reported cases in 24 countries ⁽⁹¹⁾. Cocaine was also reported as a secondary drug by around 18% of all drug outpatient clients ⁽⁹²⁾. There is a wide variation between countries, with cocaine users making up a high proportion of treatment clients only in Spain (47%) and the Netherlands (35%); though, the drug now accounts for 25% of treatment demands in Italy. Elsewhere in Europe, cocaine accounts for between 5% and 10% of all treatment demands (10 countries) or less than 5% (12 countries) ⁽⁹³⁾.

The proportion of cocaine users is higher among those entering drug treatment for the first time. Across Europe, in 2006, cocaine was reported as the primary drug by 23% of new clients (around 37 000 individuals) ⁽⁹⁴⁾. In Spain, according to the latest data, in 2005, cocaine was the primary drug most often cited by those entering treatment, and new cocaine clients represented 63% of all new Spanish drug clients.

Trends in cocaine use

Using last year prevalence among young adults (15–34 years) as an indicator of trends in levels of recent use (as cocaine use concentrates in this age group) shows that cocaine use increased considerably during the second half

⁽⁸⁹⁾ See Table EYE-1 in the 2008 statistical bulletin.

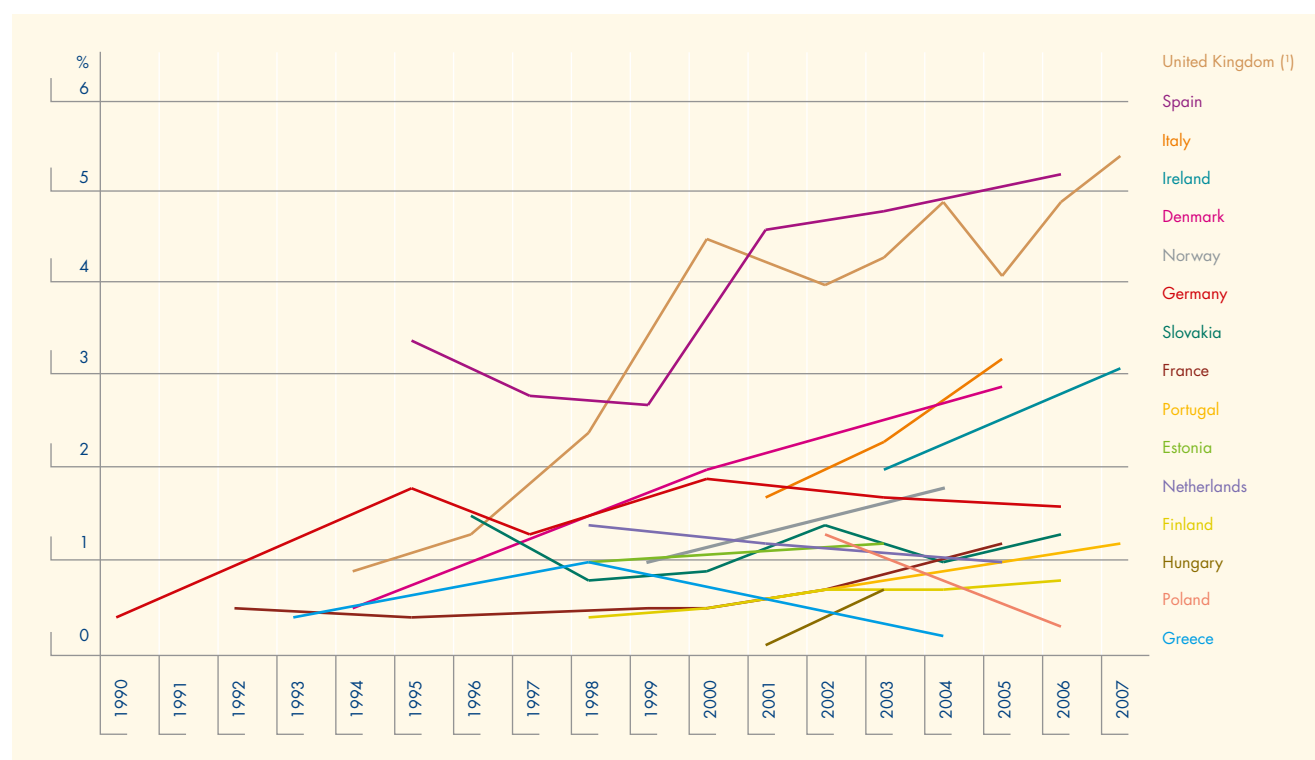
⁽⁹⁰⁾ See Figure GPS-16 in the 2008 statistical bulletin.

⁽⁹¹⁾ See Table TDI-115 and Figure TDI-2 in the 2008 statistical bulletin.

⁽⁹²⁾ See Table TDI-22 (part i) in the 2008 statistical bulletin.

⁽⁹³⁾ See Table TDI-5 (part ii) in the 2008 statistical bulletin; for Spain data refer to 2005.

⁽⁹⁴⁾ See Figure TDI-2 in the 2008 statistical bulletin.

Figure 5: Trends in last year prevalence of cocaine use among young adults (aged 15–34)

(¹) England and Wales.

NB: In Denmark, the value for 1994 corresponds to 'hard drugs'. See Figure GPS-14 in the 2008 statistical bulletin for further information.

Sources: Reitox national reports (2007), taken from population surveys, reports or scientific articles.

of the 1990s in Spain, Denmark and the United Kingdom. New data (2005–07 surveys) confirm the rising trend reported already last year in France, Ireland, Spain, the United Kingdom, Italy, Denmark and Portugal; in Germany, the Netherlands, Slovakia and Finland, a stable prevalence is observed; and in Poland, a decline was reported (Figure 5).

The increasing trend in demand for cocaine treatment noted in previous years also appears to be continuing, even if it is disproportionately influenced by a few countries. Between 2002 and 2006, the proportion of new clients demanding treatment for primary cocaine use grew from 13 % to 25 %, and the number of reported cases rose from around 13 000 to almost 30 000. An increase was also observed in the number and proportion of all cocaine clients entering drug treatment: from 22 000 clients (13 % of all treatment demands) in 2002 to 50 000 (19 %) in 2006. The largest increases were reported by Italy and Spain ⁽⁹⁵⁾.

The increasing trend in cocaine users entering drug treatment may be related to increases in the prevalence of cocaine use and related problems, but also to other factors (e.g. increase of treatment referrals or interventions specifically targeted to cocaine users); and proportions by

drug type are obviously influenced by changes in demand for treatment by the users of other substances.

International comparisons

Overall the estimated lifetime prevalence of cocaine use is lower among young adults in the European Union than among their counterparts in Australia, Canada and the USA. However, at the national level Denmark, Ireland, Spain, Italy and the United Kingdom (England and Wales) report higher figures than Australia. Only the United Kingdom (England and Wales) reports a lifetime prevalence estimate that is similar to that of the USA ⁽⁹⁶⁾. In some respect, this measure can be seen as reflecting the historical development of cocaine problems and the earlier experience of the USA and, in the European context, the United Kingdom, with widespread cocaine use.

Treatment and harm reduction

Profile of treatment clients

Outpatient centres account for nearly all (94 %) reported cocaine treatment demands in Europe ⁽⁹⁷⁾. However, it

⁽⁹⁵⁾ See Figures TDI-1 and TDI-3 and Table TDI-3 (part ii) in the 2008 statistical bulletin.

⁽⁹⁶⁾ See Figure GPS-20 in the 2008 statistical bulletin.

⁽⁹⁷⁾ See Table TDI-24 in the 2008 statistical bulletin.

should be noted that cocaine treatment also sometimes takes place in private clinics, sometimes on a residential basis, and this form of care is not well represented in the current monitoring system.

Cocaine clients entering outpatient treatment have the highest male to female ratio among drug treatment clients (five men for every woman). Their mean age is 31 years ⁽⁹⁸⁾, which makes it the third oldest drug client group, after opioid users and users of hypnotics and sedatives. Most cocaine clients report having started using the drug between the ages of 15 and 24 years ⁽⁹⁹⁾.

There is considerable inter-country variation reported in respect to the route of administration for cocaine clients. Overall, around half (55 %) of the cocaine clients are reported as snorting the drug, with nearly a third (32 %) smoking it, and a much smaller proportion (9 %) injecting the drug ⁽¹⁰⁰⁾. Broadly, two main groups of cocaine users can be identified among those in treatment. The first of these are typically more socially integrated, reporting stable housing and employment status, and generally report snorting the drug. The second is a more marginalised group of clients who are typically smoking or injecting cocaine (see EMCDDA, 2006), and more often report using either crack cocaine or the combination of cocaine and heroin. Crack clients, in particular, commonly live in large cities, belong to ethnic minority groups, and report high levels of unemployment and poor living conditions ⁽¹⁰¹⁾. This problem is small in European terms and is geographically limited, with significant crack cocaine problems limited to a relatively small number of cities. In 2006, around 8 000 crack cocaine clients (about 2 % of all drug clients) were reported to have entered drug treatment in 20 European countries, although most of them were reported by the United Kingdom ⁽¹⁰²⁾.

Treating the problems associated with the concurrent use of both cocaine and heroin is becoming an increasingly important issue in some countries. Users in treatment may be current or former heroin users, sometimes in substitution treatment. In some countries, they represent the largest group of cocaine treatment clients. Some studies have suggested that concomitant use of cocaine and heroin can be associated with the presence of dual diagnosis, or aggravate underlying psychological problems such as bipolar disorder. Also, concomitant cocaine use during methadone maintenance treatment has been shown to contribute to persistent heroin use

Health problems related to cocaine use

Awareness of the links between cocaine use and illness is often limited, even among medical professionals. As a result, some cocaine-related problems will go unidentified, and those suffering them may not receive appropriate care. Underreporting of cocaine problems will impede the understanding of the impact of the drug on public health.

The risks associated with certain problematic modes of cocaine use are well known and mostly affect recognised groups of users (former or current opioid users, marginalised groups). For example, injecting cocaine use is associated with the risk of infection and an elevated risk of overdose, while use in combination with opioids appears to be linked to a higher risk of opioid overdose.

Health problems associated with powder cocaine, however, are more likely to go unrecognised and may affect users who might not normally consider themselves at risk. Chronic use of cocaine can cause significant health problems, most of which are cardiovascular (atherosclerosis, cardiomyopathy, arrhythmias, myocardial ischemia) and neurological (cerebrovascular accidents and seizures). These problems can be aggravated by existing conditions (e.g. vascular malformations) and risk factors such as smoking or alcohol use. Many of the deaths attributed to cocaine are produced through these pathologies.

Use of cocaine in combination with alcohol increases blood levels of cocaine by as much as 30%. From a behavioural perspective, cocaine use may facilitate excessive alcohol use by enabling users to drink longer, which in turn may increase the amount of cocaine consumed (Gossop et al., 2006). The formation of cocaethylene in the liver may also be linked to further possible health risks associated with the combined use of cocaine and alcohol.

There have been few studies to assess the overall public health impact of cocaine use. A large-scale population study in the USA (1988–94) found that a quarter of non-fatal acute myocardial infarctions among those aged 18–45 years were attributed to ‘frequent lifetime cocaine use’. Frequent users had a seven times higher risk of non-fatal myocardial infarctions than non-users (Qureshi et al., 2001). However, it is not possible to generalise directly from this study to Europe. Currently, our understanding of the possible health impact of increasing cocaine use in Europe remains poorly developed and an important area for future public health inquiry.

For further reading on health problems related to cocaine use, see the 2007 selected issue on cocaine.

⁽⁹⁸⁾ See Tables TDI-10 and TDI-21 in the 2008 statistical bulletin.

⁽⁹⁹⁾ See Table TDI-11 (part iii) in the 2008 statistical bulletin.

⁽¹⁰⁰⁾ See Tables TDI-17 (part ii) and (part vi) and TDI-111 (part vii) and (part viii) in the 2008 statistical bulletin.

⁽¹⁰¹⁾ See the 2007 selected issue on cocaine and crack cocaine.

⁽¹⁰²⁾ See Table TDI-115 in the 2008 statistical bulletin.

or re-initiation — a risk for HIV and other blood-borne infections and serious medical, social and criminal problems.

Cocaine treatment

Following the increase of cocaine use and associated problems in several Member States, specialised drug treatment facilities face the difficult task of adapting their traditionally opioid-oriented services to the varied cocaine and crack-using populations. However, with the exception of Spain, in 2006, Member States assessed the availability and accessibility of cocaine-specific treatment programmes as low.

Of the Member States that report high prevalence levels of cocaine or crack cocaine, several have been particularly active in responding to this problem. In 2007, Spain introduced a specific national action plan on cocaine, while Ireland implemented and evaluated a number of specific programmes aimed at different groups of cocaine users. These programmes target problematic intranasal cocaine users, polydrug users with cocaine problems, as well as women and sex workers using cocaine. In Italy, a large-scale clinical trial will be carried out in 2008 to investigate the effectiveness of two pharmaceuticals (aripiprazole and ropinirole) for the treatment of cocaine dependence.

Information on the nature of the services provided to problem cocaine users in Europe is scarce. Nonetheless, national clinical publications or surveys among professionals provide a good insight into current practices. According to a recent United Kingdom report (NICE, 2007), cocaine-related problems in British specialised treatment centres appear to be only addressed when the primary drug problem is related to opioids. Also, a recent Italian survey among experts involved in the treatment of cocaine users indicated difficulties in applying some of the elements considered by them as crucial factors for achieving successful treatment outcomes, such as providing appropriate services (e.g. short-term residential care, structured psychosocial interventions), or clinically differentiating the different types of cocaine users. These difficulties were reported to be due to organisational problems, lack of resources and lack of effective cocaine-specific treatment interventions. It is likely that professionals in other Member States face similar problems. Adequate investment, appropriate treatment protocols and specialised training needs are, therefore, likely to be key issues for service development in this area.

Recent literature reviews indicate that current psychosocial interventions do not show strong evidence of effectiveness

in treating cocaine dependence, nor do effective pharmacological treatment approaches exist. A recent Cochrane review on psychosocial cocaine and other psychostimulant interventions concluded that the only consistent, positive behavioural results (retention in treatment, reduction in drug consumption) were observed in psychosocial interventions that included contingency management as a component ⁽¹⁰³⁾.

Unlike opioid dependence, no effective pharmacological treatment options are currently available to help cocaine users maintain abstinence or reduce use (see the 2007 selected issue on cocaine). Experimental therapeutic drugs to reduce cocaine consumption and cravings have shown potential in clinical trials (e.g. baclofen, tiagabine, topiramate). Modafinil, a central nervous system stimulant, has shown particularly promising results as a psychostimulant substitution drug with the advantage that, compared to other potential substitute drugs (e.g. d-amphetamine), its abuse liability is low (Myrick et al., 2004). Furthermore, buprenorphine, topiramate and tiagabine have shown promising results in reducing cocaine use in opioid users undergoing substitution treatment with concomitant cocaine use.

Contingency management

By rewarding abstinence, contingency management (CM) aims to reduce the reinforcing effects of drugs. Typically, CM is introduced at the beginning of a course of treatment, with psychosocial support, and the incentives are contingent on the production of drug-free urine samples. For example, the incentive could be vouchers of small monetary value, which increase with each successive period of abstinence. In this scenario, failure to stay drug-free results in the loss of the accumulated gains.

This technique repeatedly reinforces the drug-free behaviour of the client and provides a regular goal to be achieved. The strongest evidence for the effectiveness of CM in maintaining abstinence from drugs comes from studies on cocaine and heroin treatment, though there is some evidence for the approach in cannabis and methamphetamine treatment.

Although most research on CM has been conducted outside Europe, feasibility studies of CM have recently reported positive results in Spain for cocaine users (Secades-Villa et al., 2008) and in addressing cocaine use among opioid substitution treatment clients in the Netherlands (DeFuentes-Merillas and De Jong, 2008), where the average incentive at the end of the trial was goods to the value of EUR 150. An economic analysis by the National Institute for Clinical Excellence (NICE, 2007) in the United Kingdom suggested that CM is a cost-effective option in the context of cocaine treatment, especially when considering the wider economic costs of cocaine use.

⁽¹⁰³⁾ See 'Contingency management'.

Immunotherapy for cocaine dependence through a cocaine vaccine (TA-CD) is also under investigation. Once administered, the vaccine induces the production of antibodies that bind to cocaine molecules in the bloodstream and, thereby, allow naturally occurring enzymes to convert them into inactive molecules. The results of the initial clinical trials are encouraging, though further studies are required to test the viability of the vaccine as a pharmacotherapy for cocaine dependence.

The cocaine vaccine is primarily intended to be used in relapse prevention, but the term 'vaccine' also raises expectations about its potential use to prevent cocaine dependence when used as a prophylactic treatment (e.g. in drug-naïve children or adolescents). The effectiveness of such an approach is uncertain and raises ethical concerns, which are discussed in depth in the forthcoming EMCDDA publication *Addiction neurobiology: ethical and social implications*.

Harm reduction

Problem cocaine use is frequently associated with severe physical and mental health consequences. For example, an Irish two-year follow-up survey on cocaine in local communities revealed a deterioration of the general health of cocaine-dependent clients, especially among injectors. Several projects also reported a rise in the number of clients experiencing abscesses and wounds due to poor injecting habits; other problems reported among clients using cocaine include weight loss, sexually transmitted infections, heart conditions, amputations and risk taking.

Member States usually provide cocaine-injecting users with the same services and facilities as those provided to opioid users, such as recommendations for safe use, training for safe injecting and needle exchange programmes. Low-threshold drug services play a significant role in this respect as they provide basic care, as well as counselling and medical help. Users with severe cocaine and crack-related problems, such as co-morbid physical and mental health problems or social problems, such as housing, can

be referred to residential rehabilitation programmes and therapeutic communities. These programmes not only aim to achieve abstinence, but offer respite and intensive care and support in order to help the users to change their chaotic and high-risk lifestyles.

A qualitative study in six Spanish cities showed that the main substances used among sex workers were alcohol and cocaine. Drug use was reported as occasional and instrumental in helping to reduce psychological barriers or inhibition, and increase tolerance to long hours of sex work with different clients. Among the consequences of drug use in prostitutes were unprotected sex and a higher risk of violence by clients. Severe crack cocaine consumption patterns are also often observed in this group.

Sex workers with cocaine and crack cocaine problems are targeted by outreach and harm-reduction services. For example, in the Netherlands, municipal health services have implemented special health programmes targeting crack cocaine-using sex workers; in France, the association *Espoir Goutte d'Or*, which focuses on risk prevention and harm reduction for crack cocaine users and sex workers, organises voluntary counselling on a weekly basis and rapid testing for HIV and hepatitis.

Recreational use of cocaine in combination with excessive alcohol consumption frequently occurs in nightlife settings and can be associated with serious acute physical problems. As reported in Chapter 4, Member States are increasingly adopting an integrated approach towards reducing harm related to the use of alcohol and illicit drugs in recreational settings. The programmes offer advice and information to young people on the risks associated with alcohol and drug use in general, usually including material on the risks associated with acute and chronic cocaine consumption. The members of the European Foundation of Drug Helplines are also very active in raising awareness and providing support to drug users by offering advice and information on the risks of drugs.



Chapter 6

Opium use and drug injection

Heroin supply and availability

Two forms of imported heroin have historically been offered on the illicit drugs market in Europe: the commonly available brown heroin (its chemical base form), which comes mainly from Afghanistan; and white heroin (a salt form), which typically originates from south-east Asia, though this form is considerably less common ⁽¹⁰⁴⁾. In addition, some opioid drugs are produced within Europe, principally homemade poppy products (e.g. poppy straw, poppy concentrate from crushed poppy stalks or heads) in some east European countries (e.g. Latvia, Lithuania).

Production and trafficking

Heroin consumed in Europe originates predominantly in Afghanistan, which remains the world leader in illicit opium supply, followed by Myanmar and Mexico. Global opium production increased again substantially (34 %) in 2007 to an estimated 8 870 tonnes, mainly as a result of an increase in Afghan production, which was estimated at 8 200 tonnes. Global potential production of heroin has consequently reached a record level in 2007, with an estimated 733 tonnes (UNODC, 2008). The rising number of laboratories dismantled in Afghanistan over the last few years suggests that opium is increasingly being transformed into morphine or heroin in the country itself. However, large seizures of morphine in neighbouring countries (Pakistan, Iran) indicate that significant processing is also taking place outside Afghanistan (CND, 2008; UNODC, 2007a).

Heroin enters Europe mainly by two major trafficking routes: the historically important Balkan route and its several branches, following transit through Pakistan, Iran and Turkey; and the increasingly used 'northern route' via central Asia and the Russian Federation (Figure 6). Secondary trafficking routes were reported for heroin from south-west Asia, for example directly from Pakistan to Europe (United Kingdom), but also via Pakistan and countries in the Middle East and Africa to illicit markets in Europe and North America (INCB, 2008a; Europol, 2008; UNODC, 2007a; WCO, 2007). Heroin from south-west Asia is also smuggled to Europe

via south Asia (Bangladesh) (INCB, 2008a). Within the European Union, the Netherlands and, to a lesser extent, Belgium play an important role as secondary distribution hubs (Europol, 2008).

Seizures

Worldwide reported seizures of opioids increased in 2006 to 384 tonnes for opium and to 104 tonnes for heroin and morphine. While Iran accounted for most of the opium (81 %) seized worldwide, heroin and morphine were intercepted mainly in Pakistan (34 %), followed by Iran (20 %), Turkey (10 %) and China (6 %) (UNODC, 2008).

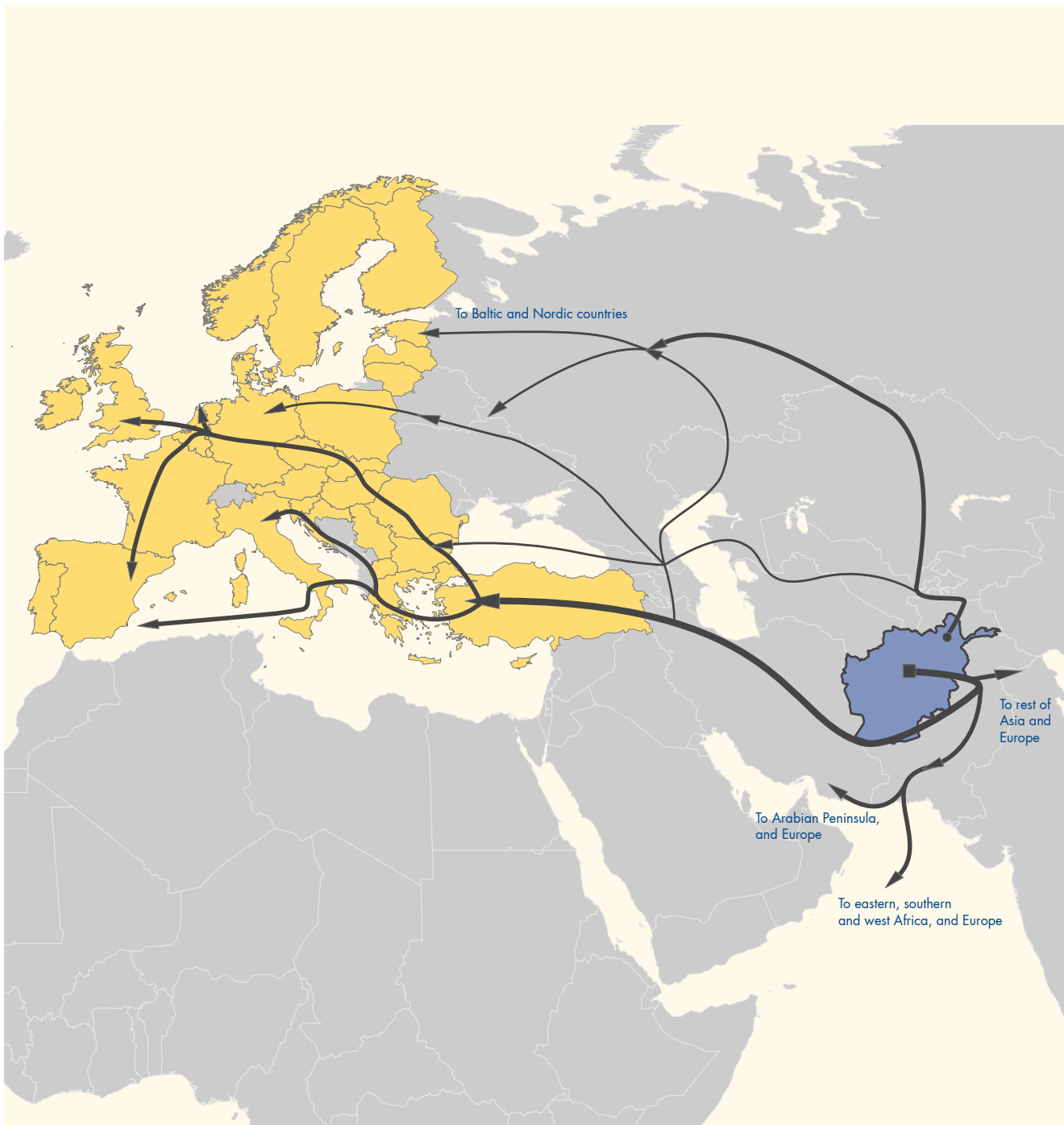
In Europe, an estimated 48 200 seizures resulted in the interception of 19.4 tonnes of heroin in 2006. The United Kingdom continued to report the highest number of seizures, while Turkey again reported the greatest amount seized, with 10.3 tonnes recovered in 2006 ⁽¹⁰⁵⁾. The amount of heroin intercepted in an average seizure varied greatly between these two countries, with the size of the average seizure in Turkey being 100 times that reported for the United Kingdom, reflecting different positions in the supply chain (Figure 6). Over the last 10 years, heroin seizures have been fluctuating downwards in Europe, with a relative peak in 2001 and a record low in 2003. The quantity of heroin intercepted in the European Union has shown an overall decline between 2001 and 2006. In contrast, the amount seized in Turkey has increased almost three-fold during this period.

Global seizures of acetic anhydride (used in the illicit manufacture of heroin) increased to 26 400 litres in 2006, most of it recovered in the Russian Federation (9 900 litres) and Colombia (8 800 litres), followed by Turkey (3 800 litres) (INCB, 2008b). The trafficking routes between Afghanistan and Europe are also being used to smuggle precursor chemicals (mainly acetic anhydride via the 'northern route') and synthetic drugs (mainly ecstasy) eastwards (Europol, 2008).

Seizures of 3-methylfentanyl reported in 2006 in Latvia and Lithuania and reports of increased injecting of

⁽¹⁰⁴⁾ For information on the sources of data for drug supply and availability, see p. 36.

⁽¹⁰⁵⁾ See Tables SZR-7 and SZR-8 in the 2008 statistical bulletin. Note that, for estimating purposes, 2006 missing data on European seizures were replaced by 2005 data. This analysis is preliminary as data for the United Kingdom are not yet available for 2006.

Figure 6: Main heroin trafficking flows from Afghanistan to Europe

NB: Trafficking flows represented on the map synthesise the analyses of a variety of international and national organisations (Reitox national focal points, Europol, INCB, UNODC, WCO). Such analyses are based on information related to drug seizures along the trafficking routes, and also intelligence information from law enforcement agencies in transit and destination countries, and sometimes on reports from complementary sources. The main trafficking routes represented on the map should be considered as indicative of the main flows, as there may be deviations to other countries along the routes, and there are numerous secondary sub-regional routes not represented here which may change rapidly.

illegally produced fentanyl in Estonia, points to the need to monitor more closely the availability of synthetic opioids such as fentanyl (which is considerably more potent than heroin).

Purity and price

In 2006, the typical purity of brown heroin ranged between 15 % and 25 % in most reporting countries, although values under 10 % were reported in Greece, France and Austria, and higher ones in Malta (31 %), Turkey (36 %) and the United Kingdom (43 %). The typical purity of white heroin was generally higher (45–70 %) in the few European countries reporting data ⁽¹⁰⁶⁾.

The retail price of brown heroin varied in 2006 from EUR 14.5 per gram in Turkey to EUR 110 per gram in Sweden, with most European countries reporting typical prices of EUR 30–45 per gram. The price of white heroin is reported only by a few European countries and ranged between EUR 27 and EUR 110 per gram. Over the period 2001–06, the retail price of brown heroin fell in a majority of the 13 European countries reporting time trends, although signs of increases have been noted in Poland.

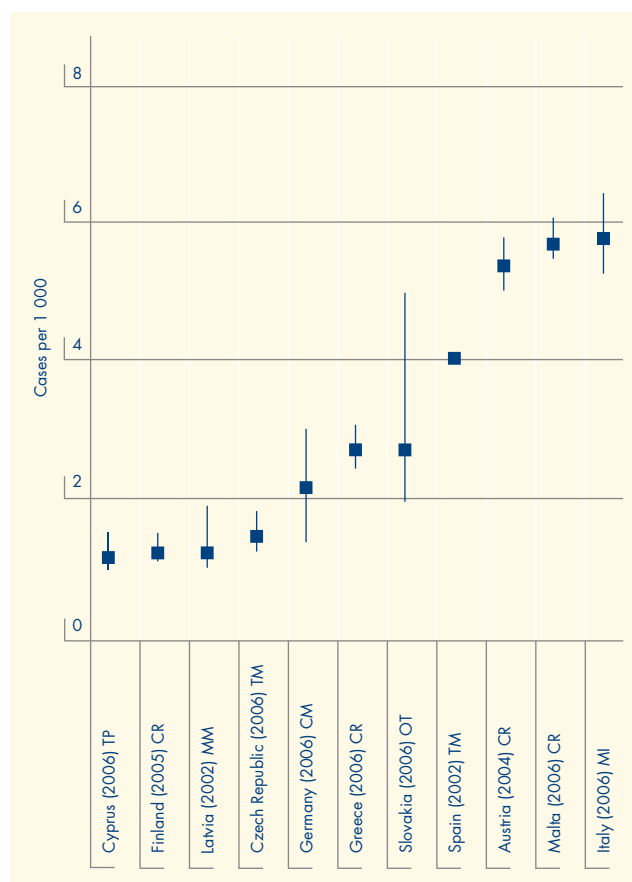
Prevalence estimates of problem opioid use

Data in this section are derived from the EMCDDA problem drug use (PDU) indicator, which includes mainly injecting drug use and the use of opioids, although in a few countries users of amphetamines or cocaine are also an important component. Estimates of the number of problem opioid users are generally uncertain, given the relatively low prevalence and hidden nature of this type of drug use, and statistical extrapolations are required to obtain prevalence estimates from the available data sources. Moreover, as most studies are based on a localised geographical area, such as a city or district, extrapolation to the national level is often difficult.

Patterns of problem drug use in Europe appear to be becoming more diverse. For example, in some countries where problem opioid use has historically predominated, recent reports suggest that other drugs including cocaine are growing in importance. The need for effective monitoring of a range of problem drug use patterns has prompted the EMCDDA to report on problem drug use sub-populations defined by drug and which may overlap ⁽¹⁰⁷⁾.

Estimates of the prevalence of problem opioid use at national level during the period 2002–06 range roughly between one and six cases per 1 000 population aged 15–64;

Figure 7: Estimates of the annual prevalence of problem opioid use (cases per 1 000 population aged 15–64)



NB: The symbol indicates a point estimate; a bar indicates an estimation uncertainty interval: a 95 % confidence interval, or one based on sensitivity analysis. Target groups may vary slightly, owing to different estimation methods and data sources; therefore, comparisons should be made with caution. Non-standard age ranges were used in the studies from Finland (15–54) and Malta (12–64). For Germany, the interval represents the lowest bound of all existing estimates and the highest bound of them, and the point estimate a simple average of the midpoints. Methods of estimation are abbreviated: CR = capture–recapture; TM = treatment multiplier; MI = multivariate indicator; TP = truncated Poisson; MM = mortality multiplier; CM = combined methods; OT = other methods. See Figure PDU-1 (part ii) in the 2008 statistical bulletin for further details.

Sources: Reitox national focal points.

overall prevalence of problem drug use is estimated to range between one and 10 cases per 1 000. The lowest well-documented estimates of problem opioid use available are from Cyprus, Latvia, the Czech Republic and Finland (though both the Czech Republic and Finland have large numbers of problem users of amphetamines), while the highest estimates are from Malta, Austria and Italy (Figure 7).

From the relatively limited data available, an estimated average prevalence of problem opioid use of between four and five cases per 1 000 of the population aged 15–64 can be derived. Assuming this reflects the EU as a whole, it implies some 1.5 million (1.3 million to 1.7 million) problem opioid users in the EU and Norway in 2006.

⁽¹⁰⁶⁾ See Tables PPP-2 and PPP-6 in the 2008 statistical bulletin for purity and price data.

⁽¹⁰⁷⁾ For an overview of available estimates of the component parts of problem drug use, see the 2008 statistical bulletin.

Trends and incidence of problem opioid use

Time trends in the prevalence of problem opioid use are difficult to estimate because of the limited number of repeated estimates and the uncertainty around individual estimates. Data from nine countries with repeated estimates during the period 2001–06 suggest diverse developments. Prevalence seems relatively stable in the Czech Republic, Germany, Greece, Italy, Malta, Slovakia and Finland, whereas an increase was observed in Austria (most recent data 2004) and signs of a possible decrease in Cyprus ⁽¹⁰⁸⁾.

Incidence of problem opioid use (the number of new cases occurring in a given year) is a more sensitive measure for changes over time, and may provide an early view on future developments in prevalence and in treatment demand. The estimation models used, though, make several assumptions. Furthermore, these models can provide only a partial estimate of incidence, as they are based on only those cases that come into contact with treatment. Only two countries report recent data, showing different trends. In Italy, incidence is estimated to have declined from around 32 500 new cases in 1990 to about 22 000 new cases in 1997, after which it has risen again to around 30 000 new cases in 2006. In Spain, to the contrary, the incidence of problem opioid use is estimated to have continuously declined since its peak around 1980, although in recent years (2002–04) it seems to have stabilised at a relatively low level (around 3 000 new cases per year). The EMCDDA, in collaboration with a group of national experts, has recently developed new guidelines for incidence estimation, in order to encourage further work in this area (Scalia Tomba et al., 2008).

Opioid users in treatment

Opioids, mainly heroin, remain the principal drugs for which clients seek treatment in most reporting countries. Of the 387 000 treatment requests reported in 2006 (data available from 24 countries), heroin was recorded as the principal drug in 47% of cases for which the primary drug is known. In most countries, between 50% and 80% of all treatment demands are reported to be related to opioid use; in the remaining countries the proportion varies between 15% and 40% ⁽¹⁰⁹⁾. Opioids are not only the most frequently reported primary drug among those entering treatment but even more so among those who are already in treatment. A recent project involving nine countries and focusing on all clients in

Opioid indicators are no longer decreasing

In contrast to trends described in previous annual reports, recent data show some increases in drug-induced deaths, heroin seizures and new treatment demands for heroin in the European Union.

In 2003, the downward trend in the number of drug-induced deaths reported in Europe, mostly related to the use of opioids, ceased and between 2003 and 2005 most Member States have been reporting an upward trend. Numbers of seizures of heroin increased by over 10% in 16 out of 24 reporting countries between 2003 and 2006. After falling for several years, new demands for treatment with heroin as the primary drug have increased in about half of the countries reporting data between 2005 and 2006. This may reflect a change in incidence of heroin use beginning a few years earlier, because of the natural time lag between initiation of use and first treatment.

These recent trends occur alongside increased opium production in Afghanistan, raising a concern that these events might be linked through increased availability of heroin on the European market. This is an important issue for further investigation as available data do not allow a clear picture to be drawn. Moreover, important confounding factors exist. For example, the use of pharmaceutical opioids for non-medical purposes is reported to have continued at high levels or increased in several countries (Czech Republic, Estonia, France, Austria, Finland) and may represent an important factor in explaining trends in drug-induced deaths.

treatment found that primary opioid users accounted overall for 59% of clients but only for 40% of clients entering treatment for the first time in their lives ⁽¹¹⁰⁾.

Most drug clients entering outpatient treatment for primary opioid use also use other drugs, including cocaine (25%), other opioids (23%) and cannabis (18%). In addition, of those in treatment for the primary use of other drugs, 13% of clients in outpatient treatment and 11% in inpatient treatment report opioids as a secondary drug ⁽¹¹¹⁾.

Some countries report a significant proportion of treatment demands relating to opioids other than heroin. Buprenorphine misuse is reported as the main reason for entering treatment by 40% of all clients in Finland and 8% of clients in France. In Latvia and Sweden, between 5% and 8% of drug clients report primary use of opioids other than heroin or methadone: mainly buprenorphine, painkillers and other opioids ⁽¹¹²⁾. Several countries report

⁽¹⁰⁸⁾ See Tables PDU-6 (part ii) and PDU-102 in the 2008 statistical bulletin for full information including confidence intervals.

⁽¹⁰⁹⁾ See Table TDI-5 in the 2007 statistical bulletin.

⁽¹¹⁰⁾ See Table TDI-39 in the 2008 statistical bulletin.

⁽¹¹¹⁾ See Tables TDI-22 and TDI-23 in the 2008 statistical bulletin.

⁽¹¹²⁾ See Table TDI-113 in the 2008 statistical bulletin.

an increase in the proportion of polydrug users among heroin clients and a rise in the number of clients using opioids other than heroin.

The absolute number of heroin treatment demands reported through the treatment demand indicator increased by over 30 000 cases from 108 100 to 138 500 between 2002 and 2006. Similarly, among clients entering treatment for the first time in their life, there was an increase in the number of primary heroin users from around 33 000 in 2002 to over 41 000 in 2006. Factors that might explain this trend include an increase in the numbers of problem heroin users, an expansion in treatment provision or improved reporting coverage.

Injecting drug use

Prevalence of injecting drug use

Injecting drug users are among those at highest risk of experiencing health problems from their drug use, such as blood-borne infections (e.g. HIV/AIDS, hepatitis) or drug-induced deaths. Only 11 countries were able to provide recent estimates of the levels of injecting drug use, despite their importance for public health (Figure 8). Improving the level of information available on this special population is, therefore, an important challenge for the development of health monitoring systems in Europe.

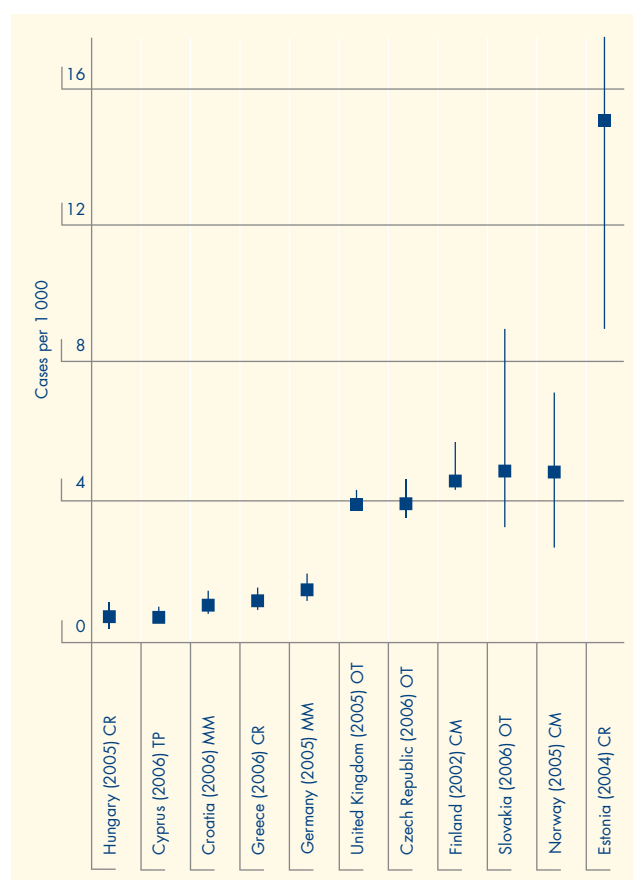
The available estimates suggest large differences between countries in the prevalence of injecting drug use. Estimates range between one and five cases per 1 000 population aged 15–64 for most of the countries, with an exceptionally high level of 15 cases per 1 000 reported in Estonia.

The lack of data makes drawing conclusions on time trends in the prevalence of injecting difficult, although the available data suggest a decline in Norway (2001–05), and a stable situation in the Czech Republic, Greece, Cyprus and the United Kingdom⁽¹¹³⁾.

Injecting among opioid users entering treatment

Overall, 43 % of all opioid users entering drug outpatient treatment in 2006 reported injecting the drug. Changes in the proportion of injectors among heroin users entering treatment may indicate trends in the wider group of problem opioid users. Declines in this proportion between 2002 and 2006 have been observed by nine countries (Denmark, Germany, Ireland, Greece, France, Italy, Sweden, United Kingdom, Turkey), whereas two countries report an increase (Romania, Slovakia). Countries differ considerably in the levels of injecting among heroin users

Figure 8: Estimates of the prevalence of injecting drug use (cases per 1 000 population aged 15–64)



NB: The symbol indicates a point estimate; a bar indicates an estimation uncertainty interval: a 95 % confidence interval, or one based on sensitivity analysis. For Estonia, the upper limit of the uncertainty interval is off-scale (37.9 per 1 000). Target groups may vary slightly, owing to different estimation methods and data sources; therefore, comparisons should be made with caution. Methods of estimation are abbreviated: CR=capture-recapture; TM=treatment multiplier; MI=multivariate indicator; TP=truncated Poisson; MM=mortality multiplier; CM=combined methods; OT=other methods. See Figure PDU-2 in the 2008 statistical bulletin for further details.

Sources: Reitox national focal points.

entering treatment, with the lowest proportions of injectors reported in Spain, France and the Netherlands (under 25 %) and the highest (over 80 %) in Bulgaria, the Czech Republic, Romania, Slovakia and Finland⁽¹¹⁴⁾.

Among opioid users entering outpatient treatment for the first time in 2006, a slightly lower proportion report injecting the drug (around 40 %). Looking at time trends, the proportion of injectors among new opioid clients decreased from 43 % in 2003 to 35 % 2006 in the 13 countries where sufficient data are available⁽¹¹⁵⁾.

An analysis of the treatment demand data for nine countries taking part in a pilot study revealed that around 63 % of all opioid clients (those already in treatment

⁽¹¹³⁾ See Table PDU-6 (part iii) in the 2008 statistical bulletin.

⁽¹¹⁴⁾ See Tables PDU-104, TDI-4, TDI-5 and TDI-17 (part v) in the 2008 statistical bulletin.

⁽¹¹⁵⁾ See Figure TDI-7 and Table TDI-17 (part i) in the 2008 statistical bulletin.

and those entering treatment in the last year) reported injecting the drug at entry to treatment ⁽¹¹⁶⁾. This suggests that among clients already in treatment the proportion of injectors at treatment entrance was relatively high.

Studies among injecting drug users may provide another window on national differences and changes over time in injecting drug use within Europe. Many countries conduct regularly repeated studies on groups of injectors, usually in the context of infectious disease testing, that are often recruited from a variety of settings in order to maximise generalisability. Comparisons between countries should be made with caution due to potential biases in selective recruitment to these studies ⁽¹¹⁷⁾.

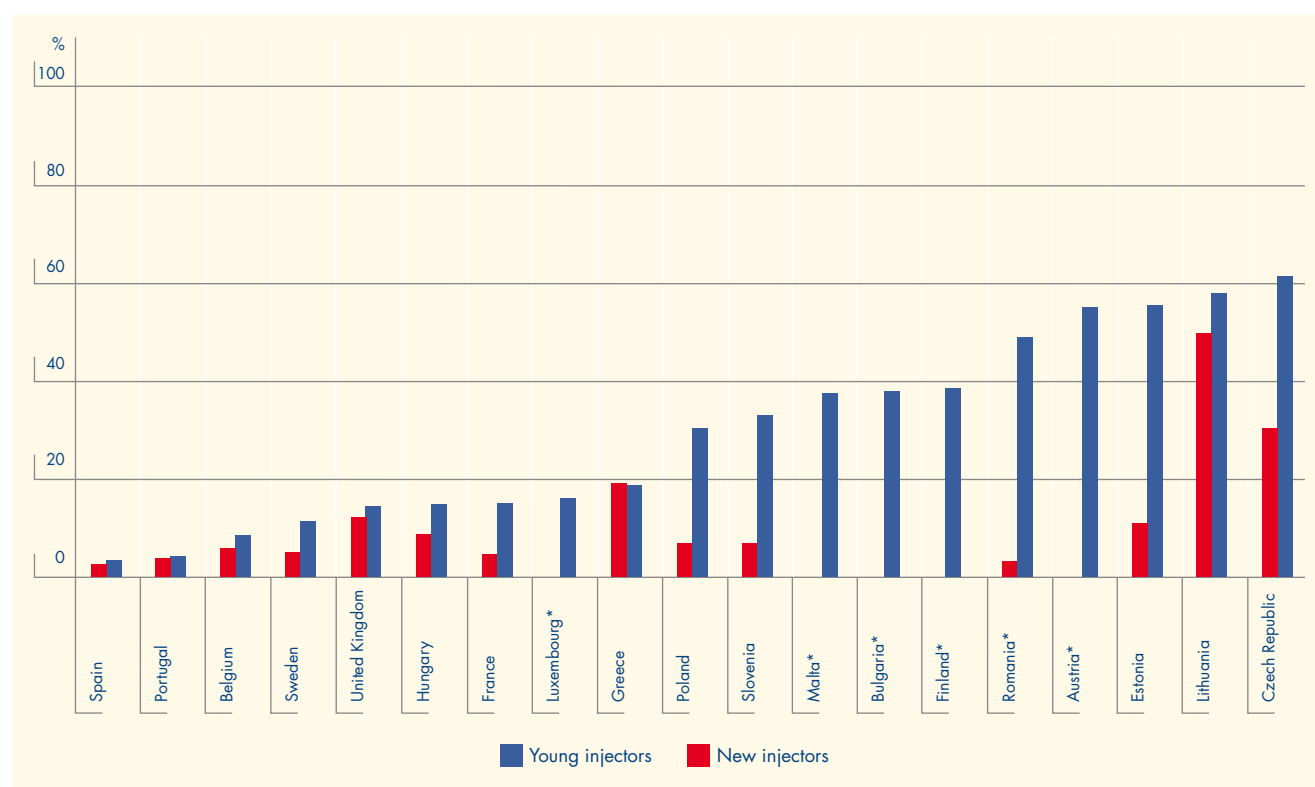
Some countries show large proportions (above 20%) of new injecting drug users (injecting for less than two years) in these studies, whereas in several countries this proportion is under 10% (Figure 9). Young injecting drug users (under age 25) account for more than 40% of the injectors sampled in the Czech Republic, Estonia,

Lithuania, Austria and Romania, whereas less than 20% of the injectors sampled are under 25 in nine other countries.

In general, a large proportion of new injectors has to give cause for alarm, especially if reinforced by a large proportion of young injectors. While a higher proportion of new injectors can indicate a new upsurge of injecting, other factors could also relate to this (e.g. shorter injecting careers, better treatment availability, higher death rates among the older population).

Countries with long-established problem opioid user populations generally have low proportions of both young and new injectors. In the remaining, often newer, Member States data show higher levels of young injectors. The varying levels of new injectors in these countries, where information is available, may reflect differences in the average age of initiation as well as increasing injecting incidence among the younger or the older populations.

Figure 9: Proportion of young and new injectors in samples of injecting drug users



NB: Samples are of injectors tested for infectious diseases (HIV and HCV). The latest available sample for each country during the period 2002–06 has been used, subject to there being at least 100 injectors. An asterisk indicates that no data are available for new injectors. For further information, see Figure PDU-3 in the 2008 statistical bulletin.

Sources: Reitox national focal points.

⁽¹¹⁶⁾ See Tables TDI-17 (part v) and TDI-40 in the 2008 statistical bulletin.

⁽¹¹⁷⁾ It might be expected that the proportion of young or new injecting drug users is lower in samples recruited from drug treatment than in more 'open' settings such as low-threshold services, as on average clients entering treatment do so only after some years of using drugs. However, statistical analysis of the association between recruitment setting and proportions of young or new injecting drug users shows no statistical significance, suggesting that recruitment setting (coded as 'only drug treatment', 'no drug treatment' and 'mixed settings') may not have a strong effect on these proportions.

Treatment of problem opioid use

Profile of opioid clients entering treatment

Clients entering treatment for primary opioid use tend to be older (mean age 32 years) than those entering treatment for cocaine, other stimulants and cannabis (mean age 31, 27 and 24 years respectively), with female clients generally being one or two years younger than their male counterparts. Opioid clients are generally younger in those countries that have joined the European Union since 2004 and in Ireland, Greece, Austria and Finland ⁽¹¹⁸⁾.

On average, men outnumber women opioid clients by three to one, with higher proportions of men found, in particular, in south European countries (Bulgaria, Greece, Spain, France, Italy, Cyprus, Malta, Portugal) ⁽¹¹⁹⁾.

Opioid users report higher rates of unemployment and lower levels of educational attainment than other clients (see Chapter 2), and in some countries a higher frequency of co-morbid psychiatric disorders is noted.

About half of opioid users seeking treatment report initiation before the age of 20 and around one third between the age of 20 and 24 years; first use of opioids after the age of 25 is uncommon ⁽¹²⁰⁾. An average time lag of between seven and nine years is reported between first use of opioids and first contact with drug treatment, with male clients reporting a longer time lag than females ⁽¹²¹⁾.

Treatment provision and coverage

Treatment for opioid users is mostly conducted in outpatient settings, which can include specialist centres, general practitioners and low-threshold facilities. In a few countries, inpatient centres also play a major role, notably Bulgaria, Greece, Finland and Sweden ⁽¹²²⁾.

Drug-free and substitution treatments for opioid use are available in all EU Member States, Croatia and Norway. In Turkey, the future use of substitution treatment is currently under study. In most countries substitution treatment is the most widely available option, though in 2005, Hungary, Poland and Sweden reported that drug-free approaches were predominant.

Substitution treatment, generally integrated with psychosocial care, is typically provided at specialised outpatient centres and in shared-care arrangements with office-based general practitioners. The available data

on the number of clients in substitution treatment suggest an overall increase in the last year, except for France, the Netherlands, Malta and Luxembourg, where the situation was stable. The biggest proportional increase was reported by the Czech Republic (42 %), although increases in excess of 10 % were also reported by Poland (26 %), Finland (25 %), Estonia (20 %), Sweden (19 %), Norway (15 %), Hungary and Austria (11 %).

A simple comparison of the estimates of the number of problem opioid users and the reported number of treatments delivered suggests that more than one in three could be receiving substitution treatment. It should, however, be borne in mind that there is still lack of precision in both data sets which implies this calculation should be viewed with caution. Furthermore, wide confidence intervals in the estimates of problem opioid use mean that comparisons between countries are difficult. Nevertheless, the available data indicate that the proportion of problem opioid users receiving substitution treatment differs considerably between

Widening pharmaceutical options

New pharmaceutical options for the treatment of opioid dependency have been developed and made available in Europe. The aims of these new prescribing options include improving the effectiveness of treatment, responding to the needs of different groups of opioid users and reducing the possibilities for the misuse of substitution drugs.

A buprenorphine/naloxone combination was launched on the EU market in 2006 as an alternative to buprenorphine alone, with the aim of reducing the potential and attractiveness for injecting use. A number of Member States are currently assessing the value of this substance as a treatment option for opioid dependence ⁽¹⁾.

Prescription of medical heroin (diamorphine), as a treatment option for chronic treatment-resistant opioid users, is available to a limited extent in the Netherlands (815 clients in 2006), the United Kingdom (400 clients) and Germany, where the participants of the heroin trial continue to receive diamorphine according to a special regulation. Additionally, a randomised trial of injectable opioids (RIOTT) is currently underway in the United Kingdom which will assess the effectiveness of injectable diamorphine, injectable methadone and oral methadone. In February 2008, it was also decided to introduce a diamorphine prescription scheme in Denmark.

⁽¹⁾ Technical information on the substance is available on the EMEA website (<http://www.emea.europa.eu/humandocs/Humans/EPAR/suboxone/suboxone.htm>).

⁽¹¹⁸⁾ See Tables TDI-10, TDI-32 and TDI-103 in the 2008 statistical bulletin.

⁽¹¹⁹⁾ See Tables TDI-5 and TDI-21 in the 2008 statistical bulletin.

⁽¹²⁰⁾ See Tables TDI-11, TDI-107 and TDI-109 in the 2008 statistical bulletin.

⁽¹²¹⁾ See Table TDI-33 in the 2008 statistical bulletin.

⁽¹²²⁾ See Table TDI-24 in the 2008 statistical bulletin.

countries, with estimated rates of around 5 % in Slovakia, 20–30 % in Finland, Greece and Norway, 35–45 % in the Czech Republic, Malta and Italy, and over 50 % in the United Kingdom (England), Germany and Croatia ^[123].

While oral methadone remains the main drug used for substitution treatment in Europe, the use of buprenorphine is becoming increasingly common. One reason for this is that it may be associated with lower rates of mortality when misused (Connock et al., 2007). The Danish National Board of Health, after a review of substitution guidelines, has now urged general practitioners to prescribe buprenorphine instead of methadone.

Treatment effectiveness, quality and standards

Reviews of randomised controlled trials and observational studies conclude that methadone maintenance treatment (MMT) and buprenorphine maintenance treatment (BMT) can both be effective for the management of opioid dependence. A recent Cochrane review concluded, however, that buprenorphine is less effective than methadone delivered at adequate doses (Mattick et al., 2008). A number of studies have also found that diamorphine maintenance can be effective for people failing to respond to MMT (Schulte et al., in press). Overall, substitution treatment has been linked to a number of positive outcomes including: retention in treatment, reductions in illicit opioid use and injecting, reductions of mortality and criminal behaviour, and stabilisation and improvement of health and social conditions of chronic heroin users.

Psychosocial and psychotherapeutic interventions combined with pharmacotherapy have also shown to be effective in treatment outcome studies, for example NTORS in the United Kingdom (Gossop et al., 2002) and DATOS in the United States (Hubbard et al., 2003). These approaches may not only increase treatment motivation, prevent relapse and reduce harm, but also provide advice and practical support to clients who have to address their housing, employment and family-related problems in parallel to treating their opioid dependence. The available evidence, however, does not support the use of psychosocial treatments alone (Mayet et al., 2004).

A number of countries have recently reported making improvements to their treatment guidelines. In Croatia, Denmark and Scotland, substitution programmes have been reviewed and guidelines have been revised to increase treatment quality and prevent diversion into

the black market. The United Kingdom guidelines on clinical management of drug dependence have also been updated, and the National Institute for Clinical Excellence has issued specific guidance on methadone and buprenorphine prescribing, treatment with naltrexone, detoxification and on psychosocial treatment. Portugal has also drawn up new guidance to ensure timely access to treatment.

Treatment in prisons

There is wide recognition among EU policymakers for the need to harmonise practice and quality of services between community and prisons. However, a report issued by the European Commission (2007a) highlighted the lack of services for drug users available in prisons and drew attention to the importance of intervening in this setting. Examples of the limitations in the provision of drugs services in prison include: lack of capacity and expertise (Latvia, Poland, Malta), fragmented assistance (Latvia), lack of interventions for specific groups such as young drug-using inmates (Austria), and absence of a public-health based prevention strategy (Greece).

More positively, prison drug programmes have become more widespread, and new initiatives are reported by many countries. For example, in Portugal, the legal framework for a syringe exchange programme in prisons has been established; in Lithuania, a decree obliging prisons to provide pre-release counselling was passed; in Denmark, since January 2007, all inmates with sentences longer than three months can benefit from a 'treatment guarantee'; in the Czech Republic, substitution treatment has been expanded to 10 prisons; and in Ireland, treatment services in prison are currently being assessed with the aim of achieving equivalence with those in the community.

The level of drug treatment provision in prison remains low, compared to the community, although the prevalence of drug use is generally higher. In many countries, detoxification is the preferred and sometimes the only treatment option available. Substitution treatment is offered in theory in most countries, but data indicate that few drug users receive it in practice. Exceptions are Spain, where 14 % of all sentenced prisoners (19 600) received substitution treatment in 2006, and the United Kingdom (England and Wales), where it is expected that the numbers receiving methadone will increase from 6 000 to 12 000 following the introduction of new guidance in April 2007.

Practical guidance for substitution treatment in custodial settings, endorsed by the WHO and UNODC, has

[123] See Figure HSR-1 in the 2008 statistical bulletin.

recently been published (Kastelic et al., 2008), and some research points to opioid substitution therapy in prison showing positive effects on risk behaviour and mortality (Dolan et al., 2003). A recent review of research studies on prison-based substitution programmes concluded that positive effects depended on the provision of

sufficient dosage and treatment lasting for the duration of imprisonment (Stallwitz and Stöver, 2007). Furthermore, careful discharge planning and linkage to community care are other key elements of services in this area needed to ensure that gains in health status made during time spent in custody are not subsequently lost ⁽¹²⁴⁾.

⁽¹²⁴⁾ See 'Elevated risk of drug-induced death on completion of prison sentences or treatment', p. 88.



Chapter 7

Drug-related infectious diseases and drug-related deaths

Drug-related infectious diseases

Infectious diseases such as HIV and hepatitis B and C are among the most serious health consequences of drug use. Even in countries where HIV prevalence in injecting drug users (IDUs) is low, other infectious diseases including hepatitis A, B and C, sexually transmitted diseases, tuberculosis, tetanus, botulism and human T-lymphotropic virus may disproportionately affect drug users. The EMCDDA is systematically monitoring HIV and hepatitis B and C among injecting drug users (prevalence of antibodies, or other specific markers in the case of hepatitis B). The data have to be interpreted with caution, given several methodological limitations in the different data systems ⁽¹²⁵⁾.

HIV and AIDS

By the end of 2006, the incidence of diagnosed HIV infection among injecting drug users (IDUs) appears to have been low in most countries of the European Union, and the overall EU situation appears relatively positive in a global context. This may, at least partly, follow from the increased availability of prevention, treatment and harm-reduction measures, including substitution treatment and needle and syringe programmes. Other factors, such as the decline in injecting drug use that has been reported in some countries, may also have played an important role. Nonetheless, in some parts of Europe, data suggest that HIV transmission related to injecting drug use still continued at relatively high rates in 2006, underlining the need to ensure the coverage and effectiveness of local prevention practice.

Trends in HIV infection

Data on newly diagnosed cases related to injecting drug use for 2006 suggest that infection rates are still falling overall in the European Union, following the peak in 2001–02, which was due to outbreaks in Estonia, Latvia and Lithuania ⁽¹²⁶⁾. In 2006, the overall rate of

newly diagnosed infections among IDUs in the 25 EU Member States for which national data are available was 5.0 cases per million population, down from 5.6 in 2005 ⁽¹²⁷⁾. Of the three countries reporting the highest rates of newly diagnosed infections (Estonia, Latvia, Portugal), Portugal continued to report a downward trend in 2005/06, while in Estonia and Latvia the trends levelled off at 142.0 and 47.1 newly diagnosed cases per million population, respectively. Between 2001 and 2006, no strong increases have been observed in any country in the population rate of HIV infection. Where some slight increase is observed (e.g. Bulgaria, Ireland), this remained below one additional case per million population per year.

Looking at absolute numbers reveals which countries contribute more strongly to the overall EU total. The largest numbers of newly diagnosed infections among IDUs were reported in 2006 by countries with the highest infection rates (Portugal, 703 new diagnoses; Estonia, 191; Latvia, 108) ⁽¹²⁸⁾ and those with large populations (United Kingdom, 187; Germany, 168; France, 167; Poland, 112) (Figure 10). Against the general background of declining trends, the largest increases in absolute numbers since 2001 are observed in the United Kingdom, with about 13 additional cases per year, and in Germany, with about 10 additional cases, although these are not evenly distributed over the years. In Bulgaria, the low rate of increase has accelerated recently, with 0, 2, 0, 7, 13 and 34 new cases per year between 2001 and 2006, suggesting the potential for an outbreak.

Trend data from HIV prevalence monitoring in samples of IDUs are an important complement to data from HIV-case reporting, as they provide information also on non-diagnosed infection. Prevalence data are available from 25 countries over the period 2002–06 ⁽¹²⁹⁾. In 15 countries, HIV prevalence remained unchanged during the period. In five countries (Bulgaria, Germany, Spain,

⁽¹²⁵⁾ For details on methods and definitions, see the 2008 statistical bulletin.

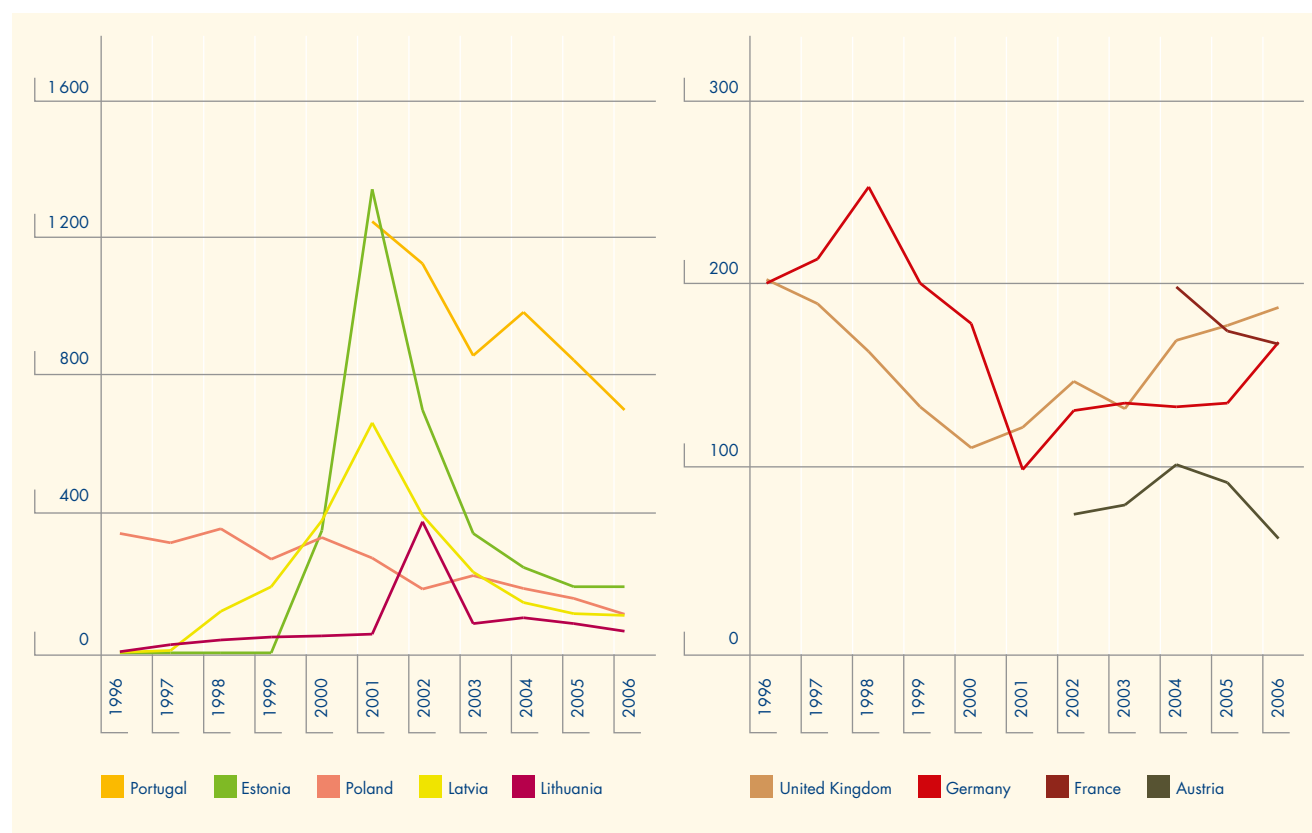
⁽¹²⁶⁾ See Table INF-104 in the 2008 statistical bulletin.

⁽¹²⁷⁾ National data are not available from Spain and Italy. Adjusting for those two countries, the rate would be 5.9 cases per million population, down from 6.4 in 2005.

⁽¹²⁸⁾ In Portugal, 703 cases were reported by EuroHIV for 2006, while 432 were reported by the Portuguese Epidemiological Surveillance Centre of Transmissible Disease (CVEDT); the discrepancy is due to classification by reporting year (EuroHIV) versus by year of diagnosis (CVEDT).

⁽¹²⁹⁾ See Table INF-108 in the 2008 statistical bulletin.

Figure 10: Absolute number of newly diagnosed HIV infections among injecting drug users by year of report: countries with peak level greater than 300 (left) and between 100 and 300 (right)



NB: No national data are available for Spain and Italy, data are shown for regions where available. For both countries partial numbers totalled over 100 new cases in 2005 and showed a declining trend. For further information, see Table INF-104 in the 2008 statistical bulletin.

Source: EuroHIV.

Italy, Latvia) prevalence showed statistically significant decreases, all based on national samples. Although in two of these, regional increases were also reported: in Bulgaria, one city, Sofia; and in Italy, eight out of 21 regions and one city. Finally, in five countries, national trends are either not reported or appear stable, while there was at least one sub-national sample indicating an increasing trend, even if prevalence levels remain mostly at low levels (Belgium, Czech Republic, Lithuania, United Kingdom, and possibly Slovenia).

The comparison of trends in newly diagnosed infections related to injecting drug use with trends in HIV prevalence among IDUs suggests that the incidence of HIV infection related to injecting drug use is declining in most countries at national level. Interpretation is more difficult where these data sources partially conflict, as is the case in, for example, Bulgaria, Germany and the United Kingdom; although in these countries, both the incidence of new diagnoses and its rate of increase (except for Bulgaria in 2004–06) are low.

The high annual rate of new HIV diagnoses related to injecting drug use in Estonia, Latvia and Portugal suggests that transmission is still occurring in these countries at high levels. For Estonia, this is supported by 2005 prevalence data, which suggest that around a third of new IDUs (those injecting for less than two years) were HIV positive. Further indications of ongoing HIV transmission are given by reports of high prevalence levels (over 5%) among young IDUs (samples of 50 or more IDUs under age 25) in several countries: Spain (national data, 2005), Portugal (national data, 2006), Estonia (two regions, 2005), Latvia (national and in two cities, 2002/03), Lithuania (one city, 2006) and Poland (one city, 2005) ⁽¹³⁰⁾.

AIDS incidence and access to HAART

Information on the incidence of AIDS is important for showing the new occurrence of symptomatic disease, though it is not a good indicator of HIV transmission. AIDS incidence data may also provide information on the coverage and effectiveness of highly active antiretroviral treatment (HAART). High incidence rates of AIDS in some

⁽¹³⁰⁾ See Tables INF-109 and INF-110 in the 2008 statistical bulletin.

'Hot spots' of HIV/AIDS

The most recent data indicate that the incidence of HIV infection among IDUs is generally low in the European Union. However, vigilance is needed as some Member States continue to show high rates of new HIV infections linked to injecting drug use, and the situation is even more worrying in some neighbouring countries.

After a recent HIV epidemic in Estonia and Latvia, rates of newly diagnosed infections in IDUs decreased from 2001 but have now stabilised at still high levels (142.0 and 47.1 new cases per million population, respectively, in 2006), suggesting that transmission rates remain high. Portugal still has the largest number of newly diagnosed infections in the European Union (see p. 78) and, although the trend is down, the annual rate of newly reported diagnoses is still high at 66.5 new cases per million population in 2006.

In neighbouring countries to the east of the European Union, the situation is of particular concern. In the two largest countries, Russia and Ukraine, the number of newly diagnosed cases is high and still increasing. In 2006, newly diagnosed infections related to injecting drug use were estimated at over 11 000 in Russia and 7 000 in Ukraine (78.6 and 152.9 new cases per million, respectively).

High rates of ongoing transmission among IDUs indicate the need to review both the availability, level and range of existing service provision, including specific measures aimed at reducing the spread of infectious diseases, such as needle exchange and substitution treatment. In addition, targeted studies among IDUs are needed to investigate why some populations appear particularly vulnerable, the factors associated with risk behaviour and barriers for self-protection, and to identify promising approaches to prevent new outbreaks.

European countries may indicate that many IDUs infected with HIV do not receive HAART at a sufficiently early stage in their infection to obtain maximum benefit from the treatment.

Portugal remains the country with the highest incidence of AIDS related to injecting drug use, with an estimated 22.4 new cases per million population in 2006, although the trend is now clearly downward, from 29.9 cases per million in 2005. Relatively high levels of AIDS incidence are also reported for Estonia, Spain and Latvia, at 17.1, 15.1 and 13.5 new cases per million, respectively. Among these three countries, the trend is downward in Spain and Latvia, but not in Estonia, where the most recent data indicate an increase from 11.9 new cases per million in 2005 to 17.1 per million in 2006. An increase has also been recorded in Lithuania, from 2.0 new cases per million in 2005 to 5.0 cases per million in 2006 ⁽¹³¹⁾.

Hepatitis B and C

While high prevalence levels of HIV infection are found only in some EU Member States, viral hepatitis and, in particular, infection caused by hepatitis C virus (HCV), is more highly prevalent in IDUs across Europe. HCV antibody levels among national samples of IDUs in 2005–06 vary from around 15 % to 90 %, with most countries typically reporting levels in excess of 40 %. Only a few countries (Bulgaria, Czech Republic, Finland) report a prevalence of under 25 % in national samples of IDUs; though infection rates at this level still constitute a significant public health problem ⁽¹³²⁾.

Within countries, HCV prevalence levels can vary considerably, reflecting both regional differences and the characteristics of the sampled population. For example, in the United Kingdom, local studies report levels between 29 % and 59 %, while in Italy different regional estimates range from around 40 % to 96 %. While estimates generated from non-probability samples must always be taken with caution, the variations in prevalence levels found are likely to have important implications for the targeting and delivery of prevention and treatment programmes. Furthermore, understanding the factors responsible for differential levels of infection is likely to inform the development of better intervention strategies.

Studies among young (under age 25) and new (injecting for less than two years) IDUs suggest that the time window to prevent HCV infection is quite short, as many contract the virus early in their injecting careers. Recent studies (2005–06) typically report prevalence levels of between 20 % and 50 %, although with considerable variation between samples.

The prevalence of antibodies to hepatitis B virus (HBV) varies to an even greater extent than that of HCV antibodies, possibly partly due to differences in vaccination levels, although other factors may play a role. The most complete data set available is that for the antibody to the hepatitis B core antigen (anti-HBc), which indicates a history of infection. In 2005–06, six of the 11 countries providing data on IDUs reported anti-HBc prevalence levels of over 40 % ⁽¹³³⁾.

Trends over time in notified cases of hepatitis B and C show different pictures. The proportion of IDUs among all notified cases of hepatitis B may have declined slightly in some countries, possibly reflecting the increasing impact of vaccination programmes targeted at IDUs. In the case of hepatitis C, the proportion of IDUs among notified cases has declined in five countries, but has increased in

⁽¹³¹⁾ See Figure INF-1 in the 2008 statistical bulletin.

⁽¹³²⁾ See Tables INF-111 to INF-113 in the 2008 statistical bulletin.

⁽¹³³⁾ See Table INF-115 in the 2008 statistical bulletin.

Access to HIV testing and treatment

Among people with HIV infection in Europe, as many as one in every three may be unaware of being infected (ECDC, 2007), and reports from some EU Member States suggest that levels of awareness may even be lower among infected IDUs.

As a result many of those who become infected with the virus will not have the advantage of early treatment and care. They may also contribute to the spread of HIV by unknowingly exposing others to the risk of infection. In addition, the quality of the data collected by the HIV surveillance systems is diminished.

Preliminary data suggest that access to antiretroviral treatment and care by IDUs is disproportionately low (Donoghoe et al., 2007). Effective antiviral treatment approaches need to take account of the specific situation and needs of IDUs. These can include coexisting health and social problems (e.g. homelessness and lack of insurance), but also stigma and discrimination in healthcare settings or repeated arrests and incarceration.

To improve the access to HIV testing and treatment, the EMCDDA has developed specific guidelines for offering annual voluntary medical examination to IDUs, including testing for HIV and viral hepatitis (1).

(1) <http://www.emcdda.europa.eu/publications/methods/pdu/2008/medical-examination>

five other countries (Czech Republic, Luxembourg, Malta, Sweden, United Kingdom) (134). For both hepatitis B and hepatitis C, the proportion of IDUs among the notified cases continued to differ markedly between countries in 2006, suggesting geographic differences in the epidemiology of these infections, although bias due to different testing and reporting practices cannot be ruled out.

Preventing infectious diseases

EU Member States employ a combination of some of the following measures to reduce the spread and consequences of infectious diseases among drug users: drug treatment, including substitution treatment (see Chapter 6), health information and counselling, distribution of sterile injection materials, and education towards safer sex and safer use. The availability and coverage of these measures varies significantly between countries.

Needle and syringe programmes and opioid substitution treatment are available in all EU Member States, Croatia and Norway, although with considerable diversity in both delivery settings and targeted population. Levels of both substitution treatment and harm-reduction service

provision in Europe have increased considerably over the past decade. In some countries, however, these interventions remain limited and, overall, needs still exceed provision in these areas.

A recent cohort study in Amsterdam pointed to the benefits of the combined availability of methadone maintenance and needle exchange, as the involvement with both services, compared to the involvement with only one, was associated with a lower incidence of HCV and HIV infections among injecting drug users (Van den Berg et al., 2007).

Assessing the coverage of needle and syringe programmes is difficult, and only some countries provide relevant figures. For instance, the Czech Republic reports a network of 90 low-threshold facilities, which reaches about 25 000 drug users per year, 70 % of whom are injectors, and provides on average 210 syringes per IDU.

Increases in the numbers of syringes given out by needle and syringe programmes are reported from some countries: in Estonia, the estimated number of syringes given out per IDU has doubled between 2005 and 2006, reaching 112; in the same period, Hungary's syringe exchange programmes increased their turnover of syringes by 56 % and their clients by 84 %; and Finland continues to report a rise in the number of clients seen and syringes distributed at health counselling centres. Not all countries reported increases, however: in Malta and Slovakia, syringe provision remained stable in 2006; Poland reported a decrease in the number of agencies operating and a reduction of 15 % in the number of syringes exchanged; Romania reported a 70 % decline in the number of syringes exchanged in Bucharest, with financial problems being reported as the main cause.

In a number of countries, stabilisation or decreases in syringe exchange may reflect changes in overall patterns of drug injecting and in the availability of treatment: in Luxembourg, the number of syringes distributed by low-threshold agencies, after increasing for several years, stabilised in 2005 and decreased in 2006; recent declines in syringe provision have also been reported in Portugal and Belgium (the Flemish community), and at the local level in Germany and the Netherlands.

Needle exchange and low-threshold services may also provide a conduit to care for those with poor access to generic services. This includes primary healthcare delivery as well as measures to promote sexual health, such as the distribution of condoms and lubricants and the provision of safer sex education. The delivery of infectious disease prevention services through outreach teams or at low-threshold facilities is also established in

(134) See Tables INF-105 and INF-106 in the 2008 statistical bulletin.

Hepatitis B vaccination among drug users

Transmission of hepatitis B virus (HBV) continues among IDUs in Europe, among whom rates of active HBV infection (prevalence of HBsAg) remain high in most countries, compared to the general population ⁽¹⁾. Vaccination is considered the most effective measure to prevent hepatitis B virus (HBV) infection and its consequences. In line with the 1991 WHO recommendation, most, but not all EU Member States have adopted universal vaccination against this virus. Infant vaccination policies, however, will mostly affect future generations of drug users. To reduce the spread of the infection sooner, over half the EU Member States have adopted vaccination programmes specifically targeting injecting drug users and/or prisoners. Nevertheless, coverage of these programmes varies between countries, and a third of EU Member States still report no vaccination programme specifically for drug users.

Vaccination programmes targeting drug users often face the problem of low compliance resulting in non-completion of vaccination courses. Given the availability of a safe and effective vaccine, strategies to achieve higher levels of immunisation among those at risk may involve a flexible approach, targeting drug users early in their career and reaching out to those communities with a higher prevalence of drug use. Repeated offers of vaccination and extra doses for those with decreased immune response may also help to achieve higher immunisation results. This may require EU Member States to review and possibly fine-tune their policies in order to decrease the occurrence of chronic HBV infection and its consequences.

⁽¹⁾ See Tables INF-106 and INF-114 in the 2008 statistical bulletin.

a majority of countries, although services in this area are still being developed. For example, a transnational low-threshold prevention network, which will use common service standards and epidemiological monitoring protocols, is currently being established in Estonia, Latvia and Lithuania.

Medical services are provided at low-threshold clinics and by mobile services, or via referral schemes. For example, the Czech low-threshold network works closely with regional public healthcare services to facilitate access to counselling, testing and treatment for somatic co-morbidity, in particular, viral hepatitis. In Bulgaria, a mobile surgery in Bourgas, on the Black Sea, provided 750 consultations in 2006. Some Danish municipalities received government funds for healthcare programmes targeted at the most vulnerable drug users. In addition, the 'health room' project in Copenhagen, which combines healthcare and social counselling measures with a low-threshold approach, is a three-year pilot scheme established in 2008.

Prevention of viral hepatitis

In 2006, initiatives to prevent the spread of viral hepatitis were reported by several countries. For example, in Luxembourg, following the results of an action-research project, the provision of safer-use counselling for young and new drug users was strengthened and free access to injection paraphernalia for IDUs was improved. In Denmark, free hepatitis A and B vaccinations have been available since 2006 for drug users and their partners, and municipalities must now provide a comprehensive range of services for infectious diseases to those who inject drugs. Finally, in Ireland, a working group on HCV was tasked in 2007 with the development of a national strategy for surveillance, education and treatment.

Prisons are important settings for interventions targeting infectious diseases related to drug use and for providing healthcare to a population that is otherwise hard to reach (see Chapter 2). Recent research indicates that it is important to provide viral testing to all those who have ever engaged in illicit drug use and showed that the detection of chronic hepatitis C infection on reception into prison was a cost-effective measure (Sutton et al., 2006). In addition to those with infections receiving the necessary treatment and care, drug users in prison could benefit from a range of interventions such as health education and hepatitis B immunisation ⁽¹³⁵⁾.

Drug-related deaths and mortality

Drug use is one of the major causes of health problems and death among young people in Europe. The considerable mortality resulting from opioid use, in particular, is illustrated by an international study supported by the EMCDDA, which found that in seven European urban areas, 10% to 23% of mortality among 15- to 49-year-olds could be attributed to opioid use (Bargagli et al., 2005).

The EMCDDA's key indicator 'Drug-related deaths and mortality among drug users' principally monitors deaths directly caused by drug use (drug-induced deaths) and, to a more limited extent, overall mortality among drug users, which also includes deaths associated with various other health and social problems.

Drug-induced deaths

The EMCDDA definition of drug-induced deaths ⁽¹³⁶⁾ refers to those deaths that are directly caused (poisonings or overdoses) by the consumption of one or more drugs, where at least one of the substances present is an illicit

⁽¹³⁵⁾ See the DUP tables in the 2008 statistical bulletin.

⁽¹³⁶⁾ The term 'drug-induced deaths' has now been adopted, as it reflects more accurately the case definition used.

Drug-related mortality: a complex concept

Both the scientific and the policy debates on drug-related mortality are hampered by the range of concepts and definitions that have been used in this area. If very broad and inclusive concepts are used, the data may be of little value for understanding the underlying factors associated with drug-related mortality. For example, if all deaths with a positive toxicological examination are grouped together, this will include cases where drugs have played a direct causal role, an indirect role or no role at all.

Another important issue is the substances considered, which can be limited to illicit drugs or extended to other psychoactive substances and medicines. In the latter case, it may be difficult to distinguish deaths that may be primarily related to mental health issues (e.g. suicide in the context of depression) from those attributable to substance use. Moreover, many drug-induced deaths are, in fact, polydrug deaths, and understanding the respective role of different drugs can be difficult.

Conceptually, drug-related mortality includes two broad components. The first, and best documented, refers to those deaths directly caused by the action of one or more drugs. These deaths are typically called 'overdoses', 'poisonings' or 'drug-induced deaths'. The second component is broader and covers deaths which cannot be directly attributable to the pharmacological action of the drugs, but are nevertheless linked with their use: long-term consequences of infectious diseases, interactions with mental health issues (e.g. suicide) or with other circumstances (e.g. road traffic accidents). There are also deaths related to drugs, but due to circumstantial reasons (e.g. violence related to the drug trade).

The EMCDDA's current approach to reporting on overall drug-related mortality is based on estimating mortality rates among cohorts of problem drug users. However, other approaches are being explored whereby data from various sources can be combined to estimate the total burden of mortality attributable to drugs in a community (see 'Overall drug-related mortality', p. 86).

drug. The number of drug users, their patterns of use (injection, polydrug use) and the availability of treatment and emergency services are all factors that can influence the overall number of such deaths in a community. In general, drug-induced deaths occur shortly after the consumption of the substance(s).

Improvements in the quality and reliability of European data in recent years have allowed better descriptions of overall and national trends, and most countries have now adopted a case definition in line with that of the

EMCDDA ⁽¹³⁷⁾. Nevertheless, differences in the quality of reporting between countries mean that any direct comparisons should be made with caution.

During the period 1990–2005, between 6 500 and 8 500 drug-induced deaths were reported each year by EU Member States, adding up to about 130 000 deaths. These figures should be considered as a minimum estimate ⁽¹³⁸⁾.

Population mortality due to drug-induced death varies widely between countries, ranging from three to five to over 70 deaths per million inhabitants aged 15–64 years (on average, 21 deaths per million). Rates of over 20 deaths per million are found in 16 European countries and over 40 per million in five countries. Among males aged 15–39 years, the mortality rates are, on average and in most countries, twice as high (averaging 44 deaths per million in Europe). In 2005–06, drug-induced deaths accounted for 3.5 % of all deaths among Europeans aged 15–39 years, and for more than 7 % in eight countries ⁽¹³⁹⁾ (Figure 11).

There is still limited research on the morbidity and other consequences of non-fatal overdoses and limited investment in prevention efforts, despite evidence that the numbers may be considerable. Studies have estimated that there could be between 20 and 25 non-fatal overdoses for each fatal one. Although it is difficult to know if these estimations can be applied to the European Union as a whole, it would produce a rough estimation of about 120 000 to 175 000 non-fatal overdoses per year.

Deaths related to opioids

Heroin

Opioid overdose is one of the leading causes of death among young people in Europe, particularly among males in urban areas ⁽¹⁴⁰⁾. Opioids, mainly heroin or its metabolites, are present in the majority of drug-induced deaths reported in the European Union, accounting for 55 % to almost 100 % of all cases, with over half of the countries reporting proportions of over 80 % ⁽¹⁴¹⁾. In the toxicology reports on deaths attributed to heroin, other substances are often found that may have played a role. The most frequently reported of these are alcohol, benzodiazepines, other opioids and, in some countries, cocaine. Recent work by the EMCDDA, in which nine countries participated, found that more than one drug was mentioned in the toxicological results of 60 % to 90 % of opioid-induced deaths. This suggests that a substantial

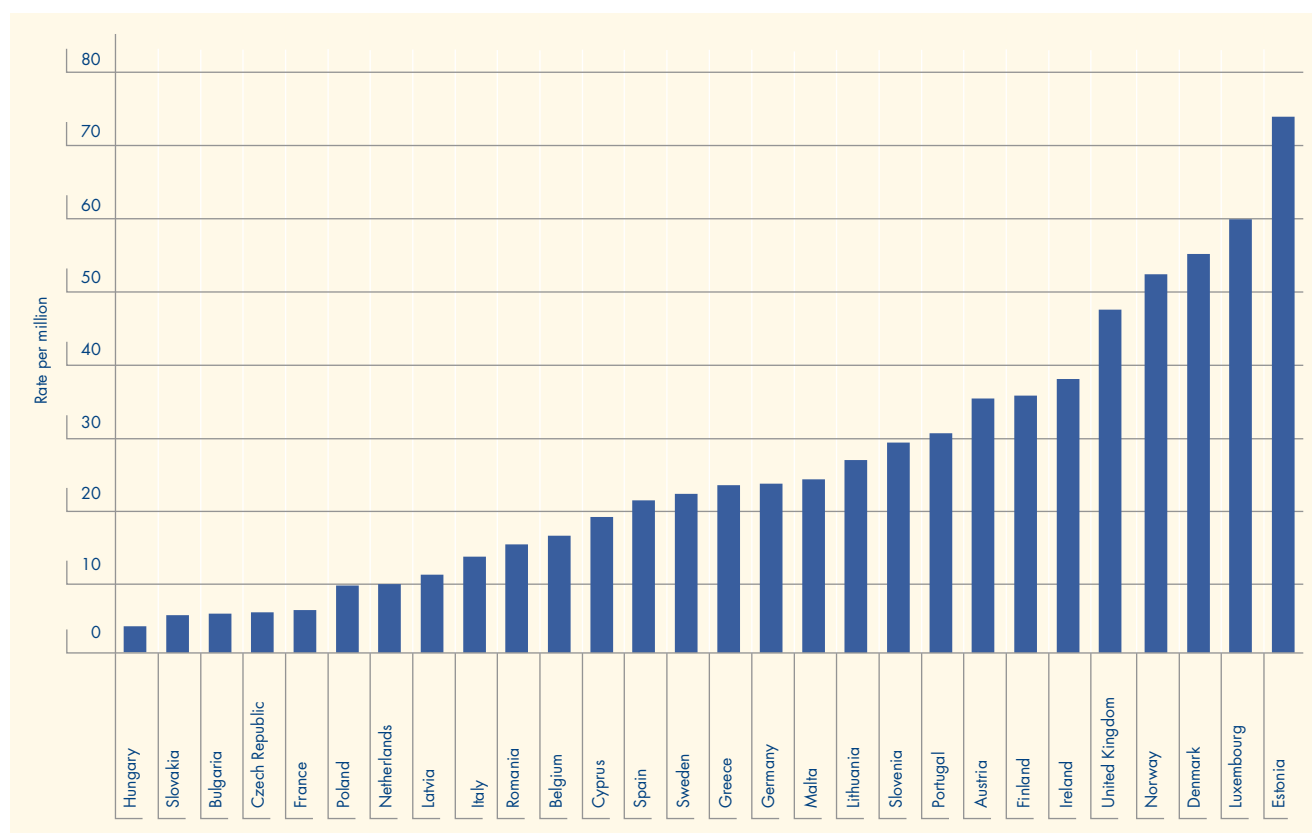
⁽¹³⁷⁾ See detailed methodological information on drug-related deaths in the 2008 statistical bulletin.

⁽¹³⁸⁾ See Table DRD-2 (part i) in the 2008 statistical bulletin.

⁽¹³⁹⁾ See Table DRD-5 and Figure DRD-7 (part ii) in the 2008 statistical bulletin.

⁽¹⁴⁰⁾ As most cases reported to the EMCDDA are opioid overdoses, general characteristics of drug-induced deaths are used for description of opioid cases.

⁽¹⁴¹⁾ See Figure DRD-1 in the 2008 statistical bulletin.

Figure 11: Mortality rates among all adults (15–64 years) due to drug-induced deaths

NB: For the Czech Republic, EMCDDA Selection D was used instead of the national definition; for the United Kingdom, the drug strategy definition was used; for Romania, data refer only to Bucharest and several counties in the competence area of the Toxicology Laboratory of Bucharest. The calculations of population mortality rates are based on national populations for 2005 as reported by Eurostat. Comparisons of population rates should be made with caution, as there are some differences in case definitions and quality of reporting. For confidence intervals and more information on the data see Figure DRD-7 (part i) in the 2008 statistical bulletin.

Sources: Reitox national reports 2007, taken from national mortality registries or special registries (forensic or police) and Eurostat.

proportion of all drug-induced fatalities may be related to polydrug use.

The majority of opioid overdose deaths (60–95 %) are male, mostly between 20 and 40 years of age, with a mean age in most countries in the mid-thirties ⁽¹⁴²⁾. In many countries, the mean age of those dying from overdose is increasing, suggesting a possible stabilisation or decrease in the number of young heroin users. However, elsewhere (Bulgaria, Estonia, Romania, Austria) a relatively high proportion of overdose deaths are among those under 25 years, which may indicate a younger population using heroin or injecting drugs in these countries ⁽¹⁴³⁾.

Methadone and buprenorphine

Research shows that substitution treatment reduces the risk of fatal overdose. Each year, however, a number of deaths

associated with opioid substitution medicines are reported, mostly due to misuse or, in a small number of cases, to problems occurring during treatment ⁽¹⁴⁴⁾.

The presence of methadone in a substantial proportion of drug-induced deaths is reported by several countries, although, in the absence of common reporting standards, the role played by the substance is often unclear. Countries reporting a non-trivial number of deaths with the presence of methadone include Denmark, Germany, the United Kingdom and Norway; other countries did not report cases, or only a limited number ⁽¹⁴⁵⁾. In the United States, a marked increase has been reported in deaths related to methadone since 1999. Most of these deaths are attributable to the misuse of methadone diverted from hospitals, pharmacies, practitioners and pain management physicians, while only a limited number of them are attributed to methadone obtained from substitution programmes ⁽¹⁴⁶⁾.

⁽¹⁴²⁾ See Table DRD-1 (part i) in the 2008 statistical bulletin.

⁽¹⁴³⁾ See Figures DRD-2, DRD-3 and DRD-4 in the 2008 statistical bulletin.

⁽¹⁴⁴⁾ See 'Deaths related to substitution treatment', p. 85.

⁽¹⁴⁵⁾ See Table DRD-108 in the 2008 statistical bulletin.

⁽¹⁴⁶⁾ National Drug Intelligence Center, 'Methadone diversion, abuse and misuse: deaths increasing at alarming rate', November 2007, document 2007-Q0317-001 (<http://www.usdoj.gov/ndic/pubs25/25930/index.htm#Key>).

Deaths related to substitution treatment

Research has demonstrated that the risk of overdose decreases substantially while heroin users are in methadone substitution treatment. For example, a recent cohort study, involving more than 5 000 heroin users, reported that the risk of overdose death was reduced by a factor of 9 while users were in substitution treatment compared with time outside, including any other type of treatment or no treatment (Brugal et al., 2005).

Methadone, however, is identified in the toxicological reports of some deaths. This does not imply the existence, in all cases, of a direct causal link, as other drugs or factors may be present. Nonetheless, overdose death can occur, and among the factors that may be involved are: changes in tolerance, excessive dosage, inappropriate use by the client, and the drug being used for non-therapeutic purposes.

Measures to prevent diversion of methadone into the illicit market have been linked to reductions in the number of reported methadone deaths in the United Kingdom (Zador et al., 2006) and, overall, good practice in substitution treatment may be an important component in reducing the risk of methadone-related deaths. Both patient and community health is, therefore, likely to be safeguarded by improving: quality standards of treatment, including prescription practices; client monitoring during the first phases of treatment; monitoring for possible cardiac toxicities; information on risks of use of other medicines or psychoactive substances; and dispensing practices to decrease the risk of diversion.

The dramatic expansion of methadone treatment in Europe has not been reflected in a parallel rise of methadone-related deaths. A study carried out in the United Kingdom found that, between 1993 and 2004, the total quantity of oral methadone prescribed increased by a factor of 3.6, while the number of deaths involving methadone decreased from 226 to 194 (Morgan et al., 2006). This represents a decrease in the methadone-related death rate from 13 per 1 000 patient years in 1993 to 3.1 per 1 000 patient years in 2004. While similar studies in other countries would be very useful, the available evidence suggests that methadone-related deaths are more likely to be linked to deficiencies in prescribing practices than to overall levels of substitution treatment.

Deaths due to buprenorphine poisoning appear to be infrequent, despite the increasing use of this substance in substitution treatment in many European countries. In France, very few deaths are reported, although the number of drug users receiving buprenorphine treatment is considerable (76 000–90 000). In Finland, however, buprenorphine is present in most drug-induced deaths, usually in combination with sedative medicines or alcohol or taken by injection⁽¹⁴⁷⁾.

Fentanyl

A worrying epidemic of fatal 3-methylfentanyl poisonings in Estonia has been recently reported based on post-mortem forensic toxicology findings, with 46 fatal poisonings in 2005 and 71 in 2006 (Ojanperä et al., in press). Furthermore, preliminary findings from Estonia indicate that 85 deaths in 2004 were related to the same substance. There have also been sporadic reports of fentanyl deaths from other European countries and recent, generally short-lived, epidemics of deaths have been reported in the United States; for example, 350 deaths were attributed to fentanyl in Chicago between 2005 and 2007 (Denton et al., 2008). The very high potency of this substance may elevate the risk of drug overdose, while it may be overlooked in toxicological screening. Increased illicit production and use of fentanyl is therefore likely to challenge both existing monitoring systems and public health responses.

Deaths related to other drugs⁽¹⁴⁸⁾

Cocaine-induced deaths are more difficult to define and identify than those related to opioids (see the 2007 selected issue on cocaine). Deaths directly caused by pharmacological overdose seem to be uncommon, and these are usually linked with very large cocaine doses. Otherwise, most cocaine deaths seem to be the result of the chronic toxicity of the drug leading to cardiovascular and neurological complications. The role of cocaine in these deaths may not always be identified, and they may not be reported as cocaine-related. Interpreting the data on deaths attributable to cocaine is further complicated by the presence of other substances in many cases, making the drawing of causal associations difficult.

In 2006, more than 450 deaths related to cocaine were reported in 14 Member States — though it is likely that the number of cocaine-induced deaths in the European Union is under-reported.

Deaths in which ecstasy is present continue to be infrequently reported. Most deaths with 'presence of ecstasy' are reported in the United Kingdom, but in many cases the drug has not been identified as the direct cause of death.

While amphetamine deaths are also infrequently reported in Europe, in the Czech Republic a substantial number of drug-induced deaths have been attributed to pervitin (methamphetamine). In Finland, 64 deaths were reported in which amphetamines were identified toxicologically, although this does not necessarily imply that the drug was the direct cause of death.

⁽¹⁴⁷⁾ See Table DRD-108 in the 2008 statistical bulletin and the 2007 annual report for further information.

⁽¹⁴⁸⁾ See Table DRD-108 in the 2008 statistical bulletin.

Trends in drug-induced deaths

Drug-induced deaths increased sharply in Europe during the 1980s and early 1990s, possibly paralleling the increase in heroin use and drug injection, and thereafter remained at high levels ⁽¹⁴⁹⁾. However, data from countries with long time series suggest differentiated trends: in some (e.g. Germany, Spain, France, Italy), deaths peaked in the early to mid-1990s, with a later decrease; in other countries (e.g. Ireland, Greece, Portugal, Finland, Sweden, Norway), the number of deaths peaked around the year 2000, before decreasing; and in some others (e.g. Denmark, Netherlands, Austria, United Kingdom), an upward trend was observed, but without a clear peak ⁽¹⁵⁰⁾.

Trends in drug-induced deaths over the period 2001 to 2005/06 are more difficult to describe. In the first years of the decade (2000–03), many EU countries reported decreases and, overall, drug-induced deaths fell by 3% in 2001, 14% in 2002 and 7% in 2003 ⁽¹⁵¹⁾. In 2004 and 2005, however, most European countries reported small increases. A number of factors could be associated with this, including: increases in polydrug use, a possible growth in the availability of heroin or an ageing population of chronic drug users ⁽¹⁵²⁾.

In the absence of data from some of the larger countries, overall estimates of the number of drug-induced deaths for 2006 remain provisional. However, the available data from 18 countries are suggestive of a small decrease compared to 2005.

The number of drug-induced deaths in those younger than 25 years of age has seen a moderate overall decrease in Europe, whereas in those Member States joining the European Union after 2004, until recently there has been an increase in the number of deaths among this age group ⁽¹⁵³⁾. However, an increase in the proportion of younger cases has been observed in recent years in Greece, Luxembourg and Austria, and to a lesser extent in Bulgaria, Latvia and the Netherlands ⁽¹⁵⁴⁾. This observation requires further investigation, as it could point to increases in the numbers of young people using opioids in these countries.

Overall drug-related mortality

A recent study found that opioid users recruited in treatment in eight sites (seven cities and one country) in

Europe had a very high mortality rate compared to peers of the same age (see EMCDDA, 2006). Other cohort studies have found mortality rates between six and 54 times higher among drug users than among the general population. These differences are mainly due to drug overdose, although other factors are also important, and in some countries AIDS deaths play a significant role. Darke et al. (2007) formulate four broad categories of deaths in drug users: overdoses (including alcohol intoxication), disease, suicide and trauma. Among diseases, conditions related to blood-borne viruses (HIV, HCV and HBV, see above), neoplasms, liver diseases and diseases of the circulatory and respiratory systems can be associated with drug use. Trauma involves mostly accidents homicides and other violence.

A recent Norwegian study of a cohort of drug users admitted to drug treatment found that among 189 recorded deaths, overdoses, accounted for half of all deaths, where the causes were known. Diseases, mainly AIDS and liver diseases, accounted for almost a further quarter, while suicide and trauma each accounted for about one tenth, and alcohol poisonings for about 2% (Figure 12). It should be noted that the proportion of AIDS deaths can be considerably higher in countries with a high HIV prevalence among drug users.

Cohort studies are a valuable tool for estimating and understanding the overall mortality related to drug use, but other approaches can help improve the understanding of the issue and provide an overview at national level. Several new methods in this area are currently being explored by the EMCDDA, in close collaboration with Member States, with the aim of implementing them at EU level. In one of these approaches, mortality rates are extrapolated from cohort studies to local (Bargagli et al., 2005) or national estimates of problem drug users (Cruts et al., 2008). In another approach, drug-attributable fractions, derived from various studies, are applied to the causes of death that are most frequently related to drug use (e.g. AIDS, accidents, suicides and poisonings) and which are recorded in the general population mortality registers.

Deaths indirectly related to drug use

AIDS deaths attributed to injecting drug use is another important cause of death. Based on data from Eurostat

⁽¹⁴⁹⁾ See Figure DRD-8 in the 2008 statistical bulletin. For historical reasons, this trend refers to the EU-15 and Norway.

⁽¹⁵⁰⁾ See Figure DRD-11 in the 2008 statistical bulletin.

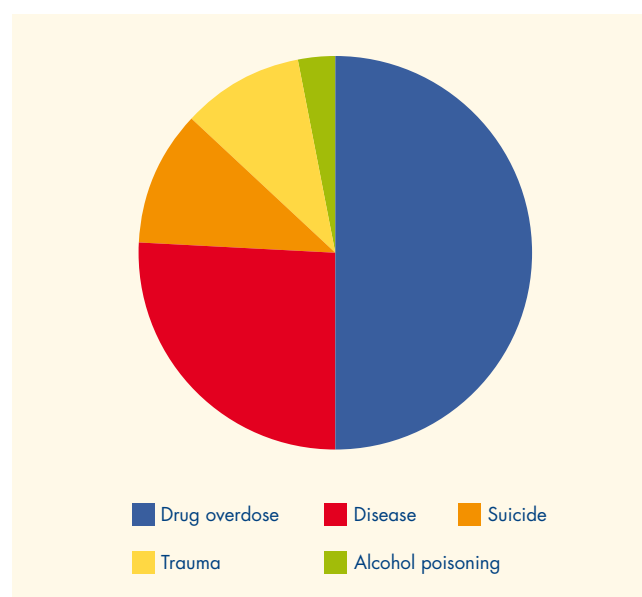
⁽¹⁵¹⁾ Figures reported here differ from those reported in previous years because of changes in case definition or coverage in Denmark, Spain, France and the United Kingdom, and updates in several countries.

⁽¹⁵²⁾ See 'Opioid indicators are no longer decreasing', p. 71, and Table DRD-2 (part i) and Figure DRD-12 in the 2008 statistical bulletin.

⁽¹⁵³⁾ See Figure DRD-13 (part i) in the 2008 statistical bulletin.

⁽¹⁵⁴⁾ See Figure DRD-9 in the 2008 statistical bulletin.

Figure 12: Known causes of death among a cohort of drug users in Norway



NB: The data are from a study based on a sample of 501 drug users admitted for treatment for drug addiction during the period 1981–91. A total of 189 deaths were recorded up to 2003, of which the cause of death could not be identified in 14 cases.

Source: Ødegard, E., Amundsen, E. J. and Kielland, K. B. (2007), 'Fatal overdoses and deaths by other causes in a cohort of Norwegian drug abusers: a competing risk approach', *Drug and Alcohol Dependence* 89, pp. 176–82.

and EuroHIV (End-year report for 2005, 2006), it can be estimated that, in 2003, over 2 600 people died of AIDS attributable to drug use ⁽¹⁵⁵⁾. Most of these deaths were reported in a few countries, with over 90% of them occurring in Spain, France, Italy and Portugal. AIDS mortality peaked in the mid-1990s and has decreased substantially following the introduction and increased coverage of HAART.

With the exception of Spain, Italy and, in particular, Portugal, population mortality rates due to AIDS attributable to drug injection are low. And, in many countries, overdose mortality is considerably higher than AIDS-related mortality among drug users ⁽¹⁵⁶⁾. The number of deaths from other causes (e.g. consequences of other infectious diseases, violence, accidents) is more difficult to assess at present and there is a need to improve data collection and estimation in this area (see preceding section).

Suicide appears to be a frequent cause of death among drug users. A literature review (Darke and Ross, 2002) found that the suicide rate among heroin users was 14 times higher than that found in the general population.

Reducing drug-related deaths

The reduction of drug-related deaths is a goal of most national drug strategies, but few countries have adopted action plans or provided systematic guidance on measures to be taken. However, in 2007, the United Kingdom's Department of Health issued new guidelines on clinical management of drug misuse and dependence, setting out specific actions for the prevention of drug-related deaths.

The contribution that treatment, including substitution along with psychosocial care and psychotherapy, can make to reduce mortality among drug users was shown in a prospective long-term study in Italy (Davoli et al., 2007). The study was conducted among a cohort of 10 454 heroin users entering public treatment services from 1998 to 2001, and evaluated retention in treatment and overdose mortality. The risk of death among the cohort was, on average, increased by a factor of 10 compared to the general population; though, among drug users undergoing treatment, the risk of death was four times that of the general population, and those who had stopped treatment were 20 times more likely to die.

The targeted dissemination of information on overdose risks and management via leaflets, brochures and posters is common practice in most countries. Furthermore, training workshops to increase knowledge and skills in overdose management competence are now reported from half of all Member States. This training can address drug users and relatives, as well as staff, and typically includes: information on specific risks, including decreased tolerance after periods of abstinence; the effects of polydrug use, in particular concomitant alcohol use, and of using drugs when no other person is present; and skills in first aid. In Italy, a combination of overdose response training with take-home dispensing of naloxone is reported to be used in half of the addiction care departments under public health service coordination.

The proactive monitoring of the psychosocial wellbeing of drug users, including of those in substitution treatment, may have value as drug overdoses are in many cases triggered by previous health or social events, and rates of intentional overdose might be high (Oliver et al., 2007).

A further challenge, in many countries, is that health and social services are dealing with an ageing population of long-term drug users, who may be more vulnerable

⁽¹⁵⁵⁾ The year 2003 was taken as the most recent year for which information from almost all Member States regarding causes of death is available through Eurostat. For detailed information on sources, numbers and computations see Table DRD-5 in the 2008 statistical bulletin.

⁽¹⁵⁶⁾ See Figure DRD-7 (part ii) in the 2008 statistical bulletin.

to both drug overdose and a range of negative health consequences. Drug injectors, in particular, may suffer from

high levels of somatic disease, notably chronic infections of the liver, which further increase their vulnerability.

Elevated risk of drug-induced death on completion of prison sentences or treatment

The risk of drug-induced death in the immediate period after release from prison or on relapse after treatment is substantially elevated, according to studies carried out in Europe and elsewhere.

A recent study carried out in the United Kingdom (England and Wales) compared the records of almost 49 000 prisoners released during 1998–2000 with all deaths recorded up to November 2003 (Farrell and Marsden, 2008). Of the 442 deaths that occurred among the sample during this period, the majority (59%) were drug-related. In the year following release, the drug-induced mortality rate was 5.2 per 1 000 men and 5.9 per 1 000 women. In the period immediately after release, expected rates were exceeded by more than 10 times for women and more than eight times for men. All female and 95% of male deaths that occurred during the first fortnight outside prison were drug-related, and could be

attributed to drug overdoses or, more generally, to substance use disorders. Coroners' records cited the involvement of opioids in 95% of the drug-induced deaths, benzodiazepines in 20%, cocaine in 14% and tricyclic antidepressants in 10% of cases.

The VEdeTTE study in Italy (Davoli et al., 2007) observed a death rate from overdose of one per 1 000 among heroin users in treatment and 23 per 1 000 in the first month after treatment, corresponding to a risk of overdose death 27 times higher in the first month out of treatment, after adjustment for possible confounders.

Despite the observed connection between drug-induced deaths and prison release or treatment termination, few countries are systematically investing in educating prisoners or those in treatment on the risk of overdose. Continuity of care and rehabilitation of drug users that are released from prison are also undeveloped in many countries. Improvements in these two areas could represent valuable opportunities to prevent drug-related deaths.



Chapter 8

New drugs and emerging trends

Introduction

The use of new psychoactive substances can have important public health and policy implications, but monitoring emerging trends is a considerable challenge. New patterns of drug use are difficult to detect because, typically, they first emerge at low levels, and in specific localities or among restricted sub-groups of the population. Few countries have monitoring systems that are sensitive to this kind of behaviour and the methodological difficulties presented by monitoring this kind of drug use are considerable. Nonetheless, the importance of identifying potential new threats is widely recognised, and it is in direct response to this that the European Union, through the Council decision on new psychoactive substances, developed an early-warning system that provides a quick-response mechanism to the emergence of new psychoactive substances on the European drug scene. Activities in support of the early-warning system form an important part of the work of the EMCDDA and fit within a broader perspective of using a wide variety of data sources to improve the timeliness and sensitivity of the European drug monitoring system.

EU action on new psychoactive substances

The Council decision on new psychoactive substances ⁽¹⁵⁷⁾ establishes a mechanism for the rapid exchange of information on new psychoactive substances that may pose public health and social threats. It also provides for an assessment of the risks associated with these new substances in order that measures applicable in the Member States for the control of narcotic and psychotropic substances can also be applied to new substances. In May 2007, a risk assessment of a new psychoactive substance BZP (1-benzylpiperazine) was carried out by the extended Scientific Committee of the EMCDDA, and a report was submitted to the Council and the European Commission ⁽¹⁵⁸⁾. The risk assessment concluded that due to its stimulant properties, risk to health and lack of medical benefits,

there was a need to control BZP, but the control measures should be appropriate to the relatively low risk posed by the substance. In March 2008, the Council adopted a decision defining BZP as a new psychoactive substance which is to be made subject to control measures and criminal provisions. Member States have one year to take the necessary measures, in accordance with their national law, to submit BZP to control measures, proportionate to the risks of the substance, and criminal penalties, as provided for under their legislation complying with their obligations under the 1971 United Nations Convention on Psychotropic Substances.

In March 2007, the EMCDDA and Europol reported to the Commission on the active monitoring of 1-(3-chlorophenyl) piperazine (mCPP) ⁽¹⁵⁹⁾. This report was produced for information purposes only and concluded that 'mCPP was unlikely to become established as a recreational drug in its own right' due to its indistinct psychoactive properties and some adverse effects. Since it appears that mCPP has no particular appeal to users, it is likely that its market in the European Union is driven by supply push rather than demand pull.

During 2007, a total of 15 new psychoactive substances were notified for the first time through the early-warning system to the EMCDDA and Europol. The group of newly notified substances is diverse and, besides new synthetic drugs, includes medicinal products and naturally occurring substances. Nine of the newly reported compounds were synthetic drugs similar to those listed in Schedules I and II of the 1971 United Nations Convention on Psychotropic Substances. They included substances from known chemical groups such as phenethylamines, tryptamines and piperazines, as well as substances with a less common chemical make-up. The group is equally divided between substances that have pronounced hallucinogenic effects and those that exhibit predominantly stimulant properties.

For the first time, in 2007, three naturally occurring substances have been reported through the information

⁽¹⁵⁷⁾ Council Decision 2005/387/JHA of 10 May 2005 on the information exchange, risk assessment and control of new psychoactive substances (OJ L 127, 20.5.2005, p. 32).

⁽¹⁵⁸⁾ <http://www.emcdda.europa.eu/publications/risk-assessments/bzp>

⁽¹⁵⁹⁾ <http://www.emcdda.europa.eu/html.cfm/index16775EN.html>

New substances under control

Since January 2006, 12 countries have reported additions or changes to their lists of controlled substances. mCPP (1-(3-chlorophenyl)piperazine) has been added to the list of controlled substances in six countries (Belgium, Germany, Lithuania, Hungary, Malta, Slovakia) and BZP (1-benzylpiperazine) has been added in four countries (Estonia, Italy, Lithuania, Malta). Of these substances, mCPP had been actively monitored by the EMCDDA and Europol, and BZP had been the subject of a risk assessment in 2007. Other substances being brought under control in the period include the hallucinogens DOC (4-chloro-2,5-dimethoxyamphetamine), DOI (4-iodo-2,5-dimethoxyamphetamine) and bromo-dragonfly (bromo-benzodifuranyl-isopropylamine) in Denmark and Sweden, and ketamine in Estonia.

Various plants with psychoactive properties are also being controlled. To this end, Belgium has restructured its legislation on psychotropic substances to include a new category that lists plants or parts of plants under control, rather than just their psychoactive ingredients as before. Among the plants placed on the list are khat (qat, *Catha edulis*) and *Salvia divinorum*. Khat is now controlled by 11 countries in Europe (a 2005 risk assessment in the United Kingdom recommended against control). In 2006, Sweden added salvinorine-A, the main active principle of *Salvia divinorum*, to its list; the plant has also been put under control in Germany in 2008. In the same period, *Tabernanthe iboga* has been added to the list of controlled substances in France, following legal control of the active ingredient, ibogaine, in Belgium, Denmark and Sweden. Finally, in response to deaths associated with hallucinogenic mushrooms, Ireland and the Netherlands have both moved to close earlier loopholes that had allowed sale and possession of fresh mushrooms containing psilocin; in Ireland the law came into force in January 2006, while in the Netherlands it is in the parliamentary process at the time of writing.

For further information, a list of substances controlled across the EU and Norway is presented in the 'Substances and classifications table' in the European Legal Database on Drugs (<http://www.emcdda.europa.eu/publications/legal-reports>).

exchange mechanism; among them, *Salvia divinorum*, a plant with potent psychoactive properties ^[160].

Internet — a marketplace for psychoactive substances

The Internet offers a window on the world of the drug user through online forums and chat rooms as well as the sites of online shops selling psychoactive alternatives to controlled substances. Information available can give insights into different aspects of the online marketplace in drugs, for

example on the working methods of online shops; the way that they respond to users' demands, and new trends among young people. To identify current developments in the online drug market, the EMCDDA conducted a snapshot study in early 2008, which surveyed 25 online shops. The results of that study are presented here.

Online shops

There are reports of an increasing number of online shops selling psychoactive alternatives to controlled drugs such as LSD, ecstasy, cannabis and opioids. While the substances offered for sale by the online shops are often referred to as 'legal highs' or 'herbal highs', in some European countries these drugs are covered by the same laws as controlled drugs, and may incur the same penalties.

Within the European Union, the majority of online shops identified in the snapshot study are based in the United Kingdom and the Netherlands and, to a lesser extent, Germany and Austria. Online shops often specialise in certain types of drug-related products, for example some mainly sell drug paraphernalia, some specialise in hallucinogenic mushrooms or 'party pills', while others market a wide range of herbal, semi-synthetic and synthetic substances.

Online shops based in Europe advertise over 200 psychoactive products. The most commonly encountered 'legal highs' are *Salvia divinorum*, kratom (*Mitragyna speciosa*), Hawaiian baby woodrose (*Argyreia nervosa*), hallucinogenic mushrooms (EMCDDA, 2006), and a variety of 'party pills'.

Internet study methodology

To obtain a snapshot, Internet searches were conducted in January 2008 using multilingual keywords and the search engine Google (<http://www.google.com>). A total of 68 EU-based online shops were identified selling various types of 'legal highs'. They were stratified according to their country of origin. EU country code domains (e.g. ES, FR, DE) or other indications of being EU-based (e.g. contact address) were used for the identification of the country of origin. More than half of the shops (52%) were located in the United Kingdom, 37% in the Netherlands, 6% in Germany, 4% in Austria and 1% in other countries (e.g. Ireland, Poland). A random sample of 25 online shops was selected for detailed analysis. Sampling fractions in each stratum (country of origin) were proportional to those of the total sample of online shops. Online shops that sold exclusively to the trade, rather than to the consumer, were excluded as were those that sold only hallucinogenic mushrooms.

[160] See 'New substances under control'.

The substances offered for sale are advertised to have effects similar to those of controlled drugs. Both *Salvia divinorum* and Hawaiian baby woodrose, along with the less frequently offered morning glory (*Ipomoea violacea*) are described as producing hallucinogenic effects similar to those of LSD. Kratom is often marketed as a substitute for opioids, various preparations are offered as alternatives to cannabis, and 'party pills' are sold as alternatives to MDMA. The 'party pills' on offer may contain plant material or semi-synthetic or synthetic substances. The main ingredient of synthetic 'party pills' is often benzylpiperazine (BZP), though the online shops appear to have replacement substances ready for when BZP becomes subject to control measures in the EU Member States. The advertised prices of substances on offer vary from EUR 1 to EUR 11 for the equivalent of one dose.

GHB and its precursor GBL: follow-up

In Europe, gamma-hydroxybutyric acid (GHB) has been under surveillance since 2000, when a risk assessment of the substance was conducted under the terms of the 1997 joint action on new synthetic drugs (EMCDDA, 2002). The addition of GHB to Schedule IV of the 1971 UN Convention on Psychotropic Substances, in March 2001, obliged all EU Member States to control the drug under their legislation addressing psychotropic substances, and new controls rapidly curtailed the previously open sale of GHB.

GHB occurs naturally in the human body, but is also used as a medicine and as a recreational drug. Non-medical use of GHB surfaced on the recreational nightlife scene in some parts of Europe, the USA and Australia during the 1990s, specifically in nightclubs where many other drugs were being commonly used. Concerns quickly arose about the health risks associated with its use. In particular, anxieties arose about the potential for surreptitiously adding GHB to drinks (commonly referred to as 'drink spiking') to facilitate sexual assault. However, there is a lack of forensic evidence for this, and establishing it is difficult due to the narrow time window for detecting GHB in body fluids. However, the association of GHB with drug-facilitated sexual assault may have contributed to a relatively 'negative image' of the substance (EMCDDA, 2008c).

GBL

Concerns are now arising about reports of consumption of gamma-butyrolactone (GBL), a precursor of GHB, which is not a scheduled substance in any of the UN drug control conventions. GBL is rapidly converted into GHB

in the body, and there is currently no readily available toxicological test to determine which of the two substances has been consumed.

GHB can be readily manufactured from GBL and 1,4-butanediol (1,4-BD), which are commonly and legally used in many branches of industry (e.g. chemicals, plastics, pharmaceuticals) and are thus available from commercial suppliers. The commercial availability of GBL has the potential to make this substance available to drug traffickers and consumers at levels of price and risk much lower than those normally encountered in illicit drug markets in the European Union. For example, the average price of a 1 gram dose of GBL purchased in bulk on the Internet varies from EUR 0.09 to EUR 2.

Health risks

Both GHB and GBL have a steep dose-response curve, with rapid onset of symptoms, which greatly increases the risks associated with illicit use. Nausea, vomiting and various degrees of impaired consciousness are the main adverse effects in most reported cases of GHB intoxication. However, the frequent presence of other drugs may complicate the clinical presentation. A Dutch study of 72 GHB users reported that the majority had passed out at least once while on GHB and some had done so frequently (Korf et al., 2002). In a survey of GHB and GBL users in the United Kingdom, adverse reactions were reported to be more common in club settings than in private homes (Sumnall et al., 2008). In London and Barcelona, the patient profile for GHB intoxications has been described as mainly young and male, with the majority presenting at weekends, usually with concomitant consumption of alcohol or illicit drugs (Miro et al., 2002; Wood et al., 2008).

Intoxications and emergencies associated with GHB have been reported in the scientific literature and to the EMCDDA since the late 1990s, albeit not systematically, in Belgium, Denmark, Spain, Luxembourg, the Netherlands, Finland, Sweden, the United Kingdom and Norway. Although GHB is associated with only a very small proportion of all drug intoxication emergencies requiring hospital or ambulance emergency services, numbers appear to have increased since 2000. In Amsterdam, in 2005, the proportion of requests for emergency assistance that required transportation to hospital was higher for cases related to GHB/GBL than to those involving other drugs.

In the United Kingdom, one London hospital emergency department — with a catchment area that includes local club venues which typically, but not exclusively, cater for the gay club scene — recorded a total of 158 GHB and

GBL presentations in 2006. While most of these patients reported consumption of GHB, chemical analysis of samples collected from nightclubs in the same catchment area during the same time period found that over half of the samples contained GBL rather than GHB. This suggests that GBL use may be more common than was previously thought (Wood et al., 2008).

Due to its rapid elimination from the body, it is difficult to establish GHB/GBL as a cause of intoxication or death. Furthermore, there is an absence of an accurate and comparable system for recording the number of deaths and non-fatal emergencies related to the use of GHB and its precursors.

Responses

Some Member States (Italy, Latvia, Sweden) have chosen to control GBL (or GBL and the other precursor

1,4-BD) under drug control or equivalent legislation and discussions about possible further controls are in progress in the United Kingdom. In accordance with Community legislation on control of precursors, GBL and 1,4-BD are included in the list of non-controlled substances for which voluntary monitoring measures to prevent their diversion from licit industrial uses are in place in all Member States.

Interventions for prevention and harm reduction in response to the use of GHB/GBL are commonly provided by national and community drugs projects that target nightlife settings. These interventions usually consist of training club staff and disseminating information about the risks of using GHB and other drugs. Such interventions often take place in conjunction with other interventions related to 'club drugs' and use of alcohol and drug combinations (EMCDDA, 2008e).



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The EMCDDA collects, analyses and disseminates factual, 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 advisers; professionals and researchers working in the field of drugs; and, more broadly, the media and general public.

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