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THE NETHERLANDS DRUG SITUATION 2009

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REPORT ON THE DRUG SITUATION 2009

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PREFACE

The Report on the Drug Situation in the Netherlands 2009 has been written for the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA). Each year, national centres of expertise on drug-related issues in the member states of the European Union ('Focal Points') draw up a report on their respective national drugs situation, according to guidelines provided by the EMCDDA. These reports form the basis of the "Annual Report on the State of the Drug Problem in the European Union" compiled by the EMCDDA. In keeping with the guidelines, the report focuses on new developments in the reporting year. In order to avoid too much overlap, the reader is repeatedly referred to previous National Reports.

This 2009 national report was written by the staff of the Bureau of the Netherlands National Drug Monitor (NDM) at the Trimbos Institute and staff of the Scientific Research and Documentation Centre (WODC) of the Ministry of Justice. The NDM was established in 1999 on the initiative of the Ministry of Health, Welfare and Sport. The Ministry of Justice also participates in the NDM. The NDM carries out the functions of the Netherlands Focal Point.

The NDM relies on the contribution of a multitude of experts and input from registration systems and monitors in the Netherlands. In particular, the authors would like to thank the members of the Scientific Committee of the NDM and other expert reviewers for their valuable comments on the draft version of the report.

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Summary

Developments in drug law and policies

In preparation of the new Dutch drug policy white paper, the Dutch drug policy of the past thirty years has been evaluated, and a 'drug risk ranking' study and a risk assessment of cannabis were performed. These studies aimed to support the Advisory Committee on Drugs Policy, which made recommendations for improvements to drug policy, as requested by the Minister of Health, Welfare and Sport, the Minister of Justice and the Minister of the Interior and Kingdom Affairs. Following publication of these reports on 2 July, 2009, a letter outlining Dutch drug policy was published on 11 September 2009 taking the recommendations of the Advisory Committee into account. The most important proposals for changing the drug policy are: use of drugs and alcohol by minors must be tackled far more rigorously; coffee shops should become points of sale for local users only; more consistent measures against organized crime are needed. The classification system used in the Opium Act will be reviewed. This proposal will be discussed in the first quarter of 2010 in the House of Representatives, before a more comprehensive policy document will be drafted.

On 1 December 2008 all hallucinogenic mushrooms were put on Schedule II of the Opium Act.

Developments in drug use and related problems

Drug use

Drug use in the general population remained generally stable between 2001 and 2005. Data for 2009 are not yet available. Drug use among pupils (12-18 years) from regular secondary schools generally stabilised between 2003 and 2007, although the overall trend since 1996 is decreasing. In 2007, last month prevalence of cannabis use was 8% (6% for girls and 10% for boys). Last month prevalence rates for other drugs were below 1%. New surveys showed that prevalence rates of drug use are appreciably higher among subpopulations of pupils from special education (depending on school type) and residential youth care.

Drug use is also more common among young people recruited in the nightlife scene. For example, among Amsterdam visitors of clubs the last month prevalence of ecstasy and cocaine were 21% and 14%, respectively. Drug use remained generally stable between 2003 and 2008. However, as Amsterdam may have an important role in 'trend setting', trends in drug use may be different elsewhere in the country. Market factors may also play a role in explaining regional differences.

There are indications that the (problem) use of GHB has increased in some subpopulations (see paragraphs below), although the drug is not very popular in the general population.

Treatment demand

The increasing demand for treatment at addiction care services related to cannabis use is continuing. In 2007, 37% of the newly registered drug clients (TDI definition) had a primary cannabis problem. Registrations of general hospitals also showed a continuing increase in admissions related to cannabis use disorders as secondary diagnosis. The proportion of cocaine clients in addiction care slightly decreased between 2003 and 2007 (38% and 32%, respectively), now clearly exceeding the proportion of opiate clients (20% in 2007). When taken separately, the ecstasy and amphetamine clients never accounted for more than 6% of the new drug clients. However, the proportion of amphetamine clients is on the rise in the past years, from 1.5% in 2001 to 5.9% in 2007.

Whether increasing or decreasing trends in treatment demand reflect changes in problem use remain to be seen. There are some signals from qualitative studies that amphetamine use had gained popularity, at least in some subpopulations in rural areas but figures are lacking. Several addiction care services have reported an increase in the number of clients presenting with GHB dependence in 2008 and 2009, but national figures are lacking. This trend is consistent with signals pointing at an increased popularity of this drug.

Health correlates and consequences

Several sources suggest that the incidence of HIV and hepatitis B and C among (ever) injecting drug users is low. For illustration, in 2008 injecting drug use was the most likely source of transmission of HIV in only 0.3% of the individuals newly registered at HIV treatment centres. None-theless, the number of chronically infected drug users and hence (future) disease burden is fairly high. In the Amsterdam Cohort Studies, the prevalence of HCV among injecting drug users is 84%. Also the prevalence of HCV in 6% of the never-injectors is much higher than prevalence rates in the general population, but several analyses suggests that there is underreporting of injecting drug users is co-infected with hepatitis B or C. This contrasts with the much lower prevalence (less than 10%) of co-infections among heterosexuals or men having sex with men.

Poly drug use remains popular, which may contribute to the occurrence of health emergencies. Research data showed that cannabis may enhance the positive subjective effects of MDMA, but may also cause an increase in heart rate, which may be harmful for sensitive subjects. Between 2003 and 2008 there was an estimated fourfold increase in the number of GHB emergencies at emergency departments of hospitals (on estimate 980 in 2008). In over one-third (36%) of these cases concomitant alcohol use was involved and in 20% use of another drug was reported.

In the past five years the total number of acute drug-related deaths fluctuates between around 100 and 130 (129 in 2008). In 2008, 52 drug-related deaths could be attributed primarily to opiates and in 22 cases cocaine use appeared to be the underlying cause of death. The decreasing proportion of relatively young victims (≤34 years) continues (34% for 2001-2008). Standardised mortality rates among methadone clients are decreasing (4.7 per 1,000 person years in 2007). Probably, the majority of (ever) injecting drugs users who are at highest risk of dying have died already and current risk ratios tend to decrease to the level among non-injecting drug users.

Market changes

In 2008 and the first half of 2009 some remarkable changes were found on the ecstasy and amphetamine markets. The proportion of pills sold as ecstasy containing only MDMA like substances decreased (71% in 2008), while the proportion of ecstasy pills containing miscellaneous

substances increased (18% in 2008). This was mainly due to an increase in pills containing mCPP but in 2009 also other substances were found, such as mephedrone and 4-fluoramphetamine. Moreover, in the course of 2008 the concentration of amphetamine in the amphetamine samples decreased, and the concentration of caffeine increased. These developments point at a reduced availability of the precursors used to manufacture ecstasy and amphetamine.

The data also showed that the proportion of cocaine samples containing medicines continued to increase. In the first half of 2009, 42% of the analysed samples delivered by consumers to prevention services (also) contained phenacetin and 50% (also) contained levamisole. Use of levamisole adulterated cocaine has been associated with serious blood diseases in the US, but no cases have been identified in the Netherlands so far. Chronic use of high phenacetin doses may cause kidney damage.

Developments in prevention and treatment

Prevention

Some outlines of a new national drug policy were sent by the responsible ministers to Parliament. According to these outlines, the main focus in the coming years will be on drug (and alcohol) prevention among young people. Measures are considered that discourage drug use, support early detection, facilitate referral to regular treatment and reduce drug-related health risks. The oldest and most widely implemented universal school-based prevention programme (the Healthy School and Drugs) is supposed to pay more attention to the perceived 'normalisation' and risks of alcohol and cannabis use, and several selective and indicated prevention efforts will probably be enforced.

Mass media campaigns become more focussed on general health prevention. Existing interventions or materials of other universal prevention programmes were and are regularly updated and new ones added, for example in *Going Out and Drugs* and in *Clubs, Alcohol and Drugs*. The First Aid services of *Educare* during large dance parties still exists and so does the anonymous drug test service of the *Drug Information and Monitoring System*. Both are examples of activities that try to prevent or reduce drug-related health risks. The frequency of contacts through the website, e-mail and chat services of the national alcohol and drug information lines increased. For preventive and treatment interventions in general, the National Institute for Public Health and the Environment (RIVM) has established the *Centre for Healthy Living* (Centrum Gezond Leven) which "focuses on strengthening the impact of local health promotion activities". Among others, the Centre for Healthy Living "assesses the quality and effectiveness of interventions using a national certification system with an independent council" (www.rivm.nl)..

Several selective and indicated prevention programmes are targeting behavioural and/or drugrelated problems in young children (childhood or adolescence) and/or their parents. Another selective prevention example is a peer-based cannabis project using entertainment and discussion. Evaluations of these programmes show promising results. Awareness of the risks of drug use among mentally retarded people has grown and interventions for this target group are currently evaluated. Several initiatives aim to limit the negative health consequences of drug use, including needle and syringe exchange programmes and drug consumption rooms. In September 2009 a national hepatitis C information campaign has been launched targeted at the general population and at 'at risk' individuals, including drug users. Further, research showed that the coverage of the vaccination B programme for risk groups is too low to be effective (12 % of all risk groups, 39% of drugs users, with broad ranges). Therefore universal vaccination will be reconsidered.

Treatment

Enhancing the quality of addiction care was the goal of the program Scoring Results. The responsibility of this program for the coming years has been granted to the Netherlands Mental Health Care Organisation. The attention is now focussed on inpatient treatment because in many aspects this treatment appeared to be diverse and largely unregistered. National standards for registration of inpatient treatment are underway. An increase in the quality of treatment is also stimulated by benchmarking and performance indicators. Evaluations of a benchmarking pilot in four treatment centres did not show exclusively positive results. For instance those concerning participation and implementation were mixed. A set of performance indicators was currently tried out and suggestions for improvements were reported.

Increasing attention is paid to young people, especially for cannabis dependence but also for dependence on GHB (protocol for detoxification). The number of web-based treatments, especially for problems related with the use of cannabis and party drugs is increasing, but studies in the effectiveness of these sites are still rare. A guideline and protocol and an exercise book for professionals working with young people with cannabis problems were published. The evaluation of Multi Dimensional Family Therapy in European countries for young cannabis dependents will be finished at the end of this year. Although the first results are yet to be published, Dutch experiences with training professionals for this therapy are positive.

The success of the experiment with medical heroin prescription among a selected group of opiate addicts, resulted in a policy directive that marks the transition of this experimental treatment to a formal medical treatment. Because there are no effective medications, nor vaccines for dependence on other illegal drugs, drug-free treatment is still the only evidence-based option.

Both dual diagnosis patients and chronic drug users usually have complex problems. Lowthreshold intensive community-based care for dual diagnosis patients already exists many years. In daily practice the diversity of this type of care is considerable and its effectiveness is currently evaluated. Case management is considered to be highly relevant for patients with complex drugrelated problems. A guideline focuses on how to perform case management for this target group and a literature review gains more insight in the effectiveness of different models of case management.

Developments in the field of law enforcement and the criminal justice system

More soft drugs involved in investigations into serious forms of organised crime Most of the serious organised crime that is subject to police investigations involves drugs, mostly hard drugs. Cocaine is the most prevalent drug involved. The fraction of cases with hard drugs shows a decreasing trend, whereas that with only soft drugs – cannabis – and both hard and soft drugs increased.

Decreasing number of Opium Act offences

The general picture is one of slight or very slight decreases in the number of Opium Act offences in the criminal justice system. 2004 was a 'peak year', since 2005/2006 there is a slightly decreasing trend. The decrease holds true for hard as well as soft drug offences. In 2008, less cannabis plantations were dismantled than in 2007 and the years before. The percentage of Opium Act offences of the total number of all offences at the Public Prosecutor and the Courts is reasonably stable (7–8%), which indicates that Opium Act cases follow a general decreasing trend in offences in the criminal justice system in the Netherlands.

Sanctions in cases with Opium Act offences

Most cases with Opium Act offences are brought to court in 2008. The fraction, however, decreased. There are remarkable differences between hard and soft drug cases: when hard drugs or both soft and hard drugs are involved, the rates are much higher than in cases with only soft drugs. Sanctions consist mainly of community service orders and prison sentences. 20% of all detainees in 2008 (reference date 30 September) committed an Opium Act offence.

Cannabis markets and cultivation (selected issue)

The cannabis market in the Netherlands is dominated by home-grown cannabis ('nederwiet'). Small-scale independent growers as well as larger-scale growers and operators and criminal cooperatives are involved in production and trafficking of cannabis. Most production sites are professionally installed and operated. A considerable amount is exported. The role of criminal cooperatives seems to be increasing recently. Coffee shops are the main retail outlets for cannabis, but there are other outlets as well. The separation of the markets of cannabis and hard drugs, which is at the core of the coffee shop system, is well realized in coffee shops, but not so much at other outlets and certainly not at the level of criminal cooperatives. Law enforcement aims at production and trafficking, using a combination of different approaches.

Drug users in the criminal justice system commit less property crimes but more violent crimes According to victim surveys and police statistics, there is a general decrease in criminality in the Netherlands. The decrease concerns property crimes in particular. This development is (partly) due to a reduction of inflow of addicts for whom opiates are their primary problem. This group committed a lot of property crimes. Violent crimes committed by drug users show an increasing tendency.

30 to 38% of the Dutch prison population contend with an addiction in the year before their imprisonment. There are a lot of problematic drug users amongst the prolific offenders.

More clients in Addiction probation services

Addiction probation services have an increasing number of clients, more than 18,000 in 2008. Supervision of clients under probation, diagnosing clients' problems and writing advisory reports for the courts and the penitentiary institutions are activities with the highest growth rates. The number of referrals to care programmes – as an alternative for imprisonment - also shows a remarkable increase.

Placement in an Institution for Prolific Offenders (ISD)

In 2008 there were per month a mean of 607 delinquents under this measure. Most of them participate in behavioural interventions in prison (56%), some do not participate in such interventions (24%), and 20% was referred to interventions (care facilities, training programmes etc.) outside prison.

Part A: New Developments and Trends

1 Drug policy: legislation, strategies and economic analysis

1.1 Legal framework

Introduction

In the Netherlands, national drug policy has four major objectives (see §1.2 for the outlines of the new Dutch drug policy):

- To prevent drug use and to treat and rehabilitate drug users.
- To reduce harm to users.
- To diminish public nuisance by drug users (the disturbance of public order and safety in the neighbourhood).
- To combat the production and trafficking of drugs.

The primary aim of Dutch drug policy is focused on health protection and health risk reduction. In §1.2 the proposed new objectives will be described. The enforcement of relevant laws also has special attention. This policy was first formulated in the white paper: The Dutch Drug Policy: Continuity and Change (1995) (Ministry of Foreign Affairs et al. 1995). The implementation of this policy was monitored and updated by four progress reports. Since then, Dutch drug policy has developed drug-specific strategies and different initiatives to diminish public nuisance, drug offences and drug-related organized crime. The strategies on ecstasy and cocaine have a strong focus on law enforcement, while the cannabis strategy touches upon all aspects of the issue (see previous national reports).

Laws

In the Netherlands, only a few laws and regulations are primarily directed towards drugs, but many other laws with a broader scope are important in relation to illegal drugs:

Drug laws and regulations

- Opium Act (Opiumwet) (criminal law)
- Opium Act Decision (Opiumwetbesluit) (Royal Decree)
- Opium Act Directives (Directive of Public Prosecution Service)
- Victor Act (Wet Victor) (criminal law/administrative law)
- Regulation Heroin Treatment (ministerial regulation)

Laws and regulations indirectly important for illegal drugs

- Prisons Act (Penitentiaire Beginselenwet) (criminal law)
- Conditional Release Act (criminal law)
- Placement in an Institution for Prolific Offenders Act (Plaatsing in een inrichting voor stelselmatige daders – ISD) - (criminal law)
- Abuse of Chemical Substances Prevention Act (Wet Voorkoming Misbruik Chemicaliën) -(chemical precursors – administrative law)

- Public Administration Probity Screening Act (Wet bevordering integriteitsbeoordelingen door het openbaar bestuur or Wet Bibob) (money laundering administrative law)
- Health Insurance Act (Zorgverzekeringswet) (health law)
- Medicines Act (Geneesmiddelenwet) (health law)
- Collective Prevention Public Health Act (Wet collectieve preventie volksgezondheid) (health law)
- Community Support Act (Wet Maatschappelijke Ondersteuning WMO) (health law)
- Plan of approach for social relief (Plan van aanpak maatschappelijke opvang) (policy letter)
- Combatting organized crime (Bestrijding Georganiseerde Misdaad) (policy letters)

For more information about the content and impact of these laws and regulations: see our previous National Reports.

The Opium Act

Dutch legislation is consistent with the provisions of all the international agreements which the Netherlands has signed, i.e. the UN Conventions of 1961, 1971 and 1988, and other bilateral and multilateral agreements on drugs. The Dutch Opium Act (1928), or Narcotics Act, is a partly criminal law. It was fundamentally changed in 1976, when a distinction was made between drugs presenting unacceptable risks (hard drugs - Schedule I) and drugs like cannabis (soft drugs - Schedule II), which were seen as less dangerous. Since then, the Opium Act has been amended on various occasions but its basic structure has been maintained.

Article 13b

In 2006, an amendment to the Opium Act was proposed. Until then, article 13b of the Opium Act combined with article 174a of the Local Government Act could only be used to close premises used for the sale of illegal drugs, if *disturbance of the public order* could be proved. In April 2006, a proposal was sent to Parliament, in which *only the sale* of illegal drugs has to be proved. The scope of this bill includes the sale of hard drugs as well as the illegal sale of cannabis. The tole-rated sale of cannabis in the coffee shops falls outside the scope of this bill. In practice, in these cases law enforcement will be used in proportionality. That means that the closing of premises will be the ultimate sanction in a chain of sanctions (T.K.30515-3). In November 2007 this law came into effect (Stb 2007-392). It falls within the jurisdiction of the local authorities to use this new instrument of administrative coercion (E.K.30515-C). In the reporting year some mayors already used this new legal instrument to close down premises.

Appendix 2

Since 15 October 2009 heroin (diamorphine) can be prescribed by physicians working at municipal treatment units for treatment resistant heroin addicts to addicts who are registered at that units. For this reason the Opium Act Decision was added with Appendix 2 (Stb 2009-348).

Hallucinogenic mushrooms

On 1 December 2008, Oripavine - an opiate and the major metabolite of thebain- was placed on Schedule I of the Dutch Opium Act, following the decision of the Commission on Narcotic Drugs of the United Nations to add this substance to Schedule I of the Single Convention (Stb 2008-486).

On the same date all hallucinogenic mushrooms, which contain the substances psilocin or psilocybin by nature, as well as mushrooms containing muscimol or iboteen acid by nature were put on Schedule II of the Opium Act (Stb 2008-486). This means that 186 different kinds of mushrooms now have the same judicial status as cannabis. This applies to the fresh as well as to dried hallucinogenic mushrooms, meaning that the dried mushrooms, which were already placed on Schedule I, move from Schedule I to Schedule II. The reason to also legally control the poisonous mushrooms like the fly agaric (amanita muscaria muscaria) and the amanita pantherina is based on research from England where after the prohibition of hallucinogenic mushrooms in 2005, a shift to the use of the mentioned poisonous mushrooms was discerned (T.K.31477-2). In May 2009 the Minister of Justice reported to parliament that the number of hallucinogenic mushroom-related incidents in Amsterdam had decreased significantly, which had been the main reason for the prohibition. According to the police the sale of mushrooms in smart shops has been reduced to negligible amounts (T.K. 24077-231).

The appeal of the Dutch Association of Smart shops against the prohibition of the hallucinogenic mushrooms was dismissed by the Court of Appeal in the Hague (Gerechtshof 's-Gravenhage 2009).

Medicinal cannabis

NNIA (no new information available)

Institution for Prolific Offenders (ISD)

In 2004, the act 'Placement in an Institution for Prolific Offenders (Plaatsing in een inrichting voor stelselmatige daders - ISD)' came into effect (Stb 2004-351) (see also § 9.3). This act refers to all prolific offenders, not only addicts. In April 2009 results of a process evaluation of the ISD Order was presented to Parliament (Goderie et al 2008). According to this report the primary objective of the ISD Order is to reduce the public nuisance caused by extremely persistent offenders. Another objective is to reduce recidivism by influencing behaviour. Only properly motivated ISD subjects are eligible for behaviour-influencing programs. The initial expectation was that a large group of ISD subjects would end up in a basic regime through a lack of motivation. However, in practice only one fifth of the ISD population is in a basic regime. All ISD subjects have a history of addiction, more than half have some combination of psychiatric problems and a personality disorder, and possible learning difficulties as well. The implementation process is progressing in fits and stars. Compatibility with the care institutions is a major problem area. It is clear that the ISD Order is not just to keep people off the streets for a long time, but also to reintegrate them (Goderie et al 2008). In her reaction to this report the state secretary announced that the number of drug-dependent offenders which will be offered quasi-compulsory treatment will be doubled from 3000 in 2006 to 6000 in 2011 (T.K. 31110-11) For more detailed information on this subject see chapter 9.

The new Conditional Release Act came into force on 1 July 2008. This Act gives authorities the possibility to impose judicial supervision on detainees with a sentence longer than one year after release from detention, for instance while they are in quasi-compulsory treatment after they served their sentence (T.K.31110-5).

A new bill regulating forensic care for detainees (Act Forensic Care) is being prepared.

Another new bill which facilitates compulsory admission of persons with psychiatric problems in treatment centres is also in preparation. For more information: see §9.6

Implementation of Laws

Opium Act Directive

By the end of 2009 the Public Prosecutor will publish new Opium Act guidelines -which were not changed since 2000- in which the insights of the Advisory Committee on Drugs Policy will be incorporated.

Drug-related nuisance NNIA

Intensified actions against ecstasy

Organised crime with regards to synthetic drugs remains a priority area for the police and the Public Prosecutor for 2008-2012 (T.K.29911-17). In 2008, 21 production locations were dismantled (Korps landelijke politiediensten 2009). For more information: see chapter 9 and 10.

Combating cocaine trafficking

The investigation and enforcement of trafficking of cocaine remains a priority in combating organized crime from 2008 to 2012. An important target of the policy is to improve international collaboration within the European Union (T.K.29911-17).

For more information see chapter 10.

1.2 National action plan, strategy, evaluation and coordination

Towards a new Dutch drug policy

During the debate on drugs policy with the Lower House on 6 March 2008, the Dutch government agreed to draft a new policy document on drugs (T.K.Handelingen 2007-2008-60-1;T.K.Handelingen 2007-2008/60-2). In preparation, the policy pursued in the past fifteen years was evaluated by the Netherlands Institute of Mental Health and Addiction (Trimbos Instituut) and the Research and Documentation Centre (Van Laar et al 2009). Also, for underpinning the advise of the Advisory Committee a risk assessment on the harmful effects of drugs (Van Amsterdam et al 2009) and a risk assessment on cannabis use in the Netherlands by the Coordination Centre for the Assessment and Monitoring of new drugs (CAM) (Coördinatiepunt 2009) were performed. The government also appointed an Advisory Committee on Drugs Policy (Van de Donk Committee) to advise on the future of drugs policy, using the outcome of the evaluation as a basis (Adviescommissie Drugsbeleid 2009). These reports were finalised and presented to the Lower House on 2 July 2009.

Drug ranking

The National Institute for Public Health and the Environment (RIVM) has performed a comparative risk assessment on the harmful effects of 17 drugs plus those of tobacco and alcohol. This assessment is comparable with the risk assessment carried out by Nutt and colleagues in the United Kingdom in 2007 (Nutt et al 2007). The 19 items were ranked according to their degree of harm. The assessment was performed by a panel of 19 experts who based their judgment on their own scientific expertise and information derived from the literature. The assessment focused on the following three categories: (1) toxicity (acute toxicity and chronic toxicity), (2) potential for dependency, and (3) social harm at individual and population levels. The most important conclusions drawn from the assessment are as follows. Firstly, alcohol, tobacco, heroin and crack scored relatively high on the scale for Total harm, whereas magic mushrooms, LSD and gat scored relatively low. Secondly, the scores of the Dutch expert panel corresponded well with previous findings from British experts as well as previous risk assessments for individual drugs by the Dutch Coordination point Assessment Monitoring new drugs (CAM). Thirdly, classed as legal drugs, alcohol and tobacco have been judged by the experts as more harmful than many of the illegal drugs included in the assessment -with the exception of heroin and crack. Finally, regarding Total harm at individual level, cannabis and ecstasy have been assessed by the experts as moderately harmful (Van Amsterdam 2009).

Risk assessment of cannabis

The Coordination Centre for the Assessment and Monitoring of new drugs (CAM) carried out a risk assessment of cannabis. The results showed that the risks associated with criminal involvement were highest followed by those related to public order and safety. In general, individual health risks and public health risks were judged to be relatively low. However, the CAM clearly pointed out that some health effects (e.g. respiratory diseases, psychosis) and 'vulnerable' groups required more attention. The CAM advised to intensify preventive interventions as well as education on the health risks associated with cannabis use. These steps should help to increase awareness in young people on the potential dangers of cannabis, especially regarding the increased risks for psychoses and psychotic disorders in vulnerable persons. Other aspects that should be highlighted are the harmful effects of substances in cannabis smoke and the safety risks involving traffic when under the influence of cannabis -- especially when combined with alcohol. Sweeping reforms of current policy measures are undesirable, in particular those aimed at the closure of Dutch coffee shops, renowned for selling cannabis. The CAM fears that such policy would be harmful to public health as a whole. Combating organised crime and reducing public nuisance related to the production and trade of cannabis are according to the CAM best served by regulating the supply of cannabis for private use (Coördinatiepunt 2009).

Evaluation

The primary aim of the evaluative study was to establish the extent to which the main objective of Dutch national drug policy has been achieved. A major conclusion is that the approach proposed in Dutch drug policy, i.e. a combination of measures targeting a reduction of demand, harm and supply, has broadly been adopted in practice. About the aim of separating the markets of hard and soft drugs the report says that it may be concluded that the markets for hard and soft drugs remain largely separate in the Netherlands. The following areas of the Dutch drug policy

were also examined: prevention and harm reduction; health care and treatment; drug crime; offences committed by drug users; drug-related public nuisance; international collaboration; research and monitoring. The evaluative study concludes "that policy has not prevented an increase in drug use between the late 1980s and the mid-1990s, particularly among minors. Nonetheless, compared to other European countries and the US, drug consumption in the Netherlands in the general population is average or low, with the exception of ecstasy, and the situation is stabilizing. With regard to managing individual (health) risks, [Dutch drug] policy appears to have been fairly successful. At the same time, it must be acknowledged that high-risk drug use is more common among vulnerable groups of youngsters. There has also been a rise in the demand for treatment for cannabis problems from addiction care services; however it is unclear whether this indicates an increase in problem use. Where crime among long-term problem hard drug users is concerned, there is a perceptible decline in property crime, which can (partly) be attributed to a decline in criminality among opiate addicts. However, there are signs of arise in violent crimes committed by drug users. In the recent period criminality associated with drug production and trafficking as well as drug-related public nuisance received greater attention than might have been expected on the basis of the 1995 Drugs Policy Paper. There has been some success with intensified policing of cocaine, ecstasy and cannabis. Although recent data indicate that these developments are going in the right direction, certain shifts in drug production and supply have been noted, and the involvement of organized criminal consortiums operating both on the domestic market, but especially internationally, continues unabated. In some border communities, coffee shop tourists cause serious public nuisance. It may be asserted that Dutch drug policy has been reasonably successful, even by today's standards, in achieving the goals set out, although certain problems continually require renewed attention" (Van Laar et al 2009).

Advisory Committee report

The Advisory Committee on Drugs Policy concluded that Dutch drugs policy achieves its objective of limiting damage to the health of users. However, according to the same Advisory Committee, in some areas the policy is in urgent need of change:

- Use of drugs and alcohol by minors must be tackled far more rigorously. Research has shown that use of such substances by young people does them greater harm than was previously assumed. It is also important that we protect vulnerable young people, in particular, from developing the kinds of problem behavior associated with these substances, and from social marginalization.
- 'Coffee shops' need to return to their original purpose: points of sale for local users (in order to keep the markets for soft and hard drugs separate), not large-scale operations serving consumers from neighbouring countries. The plethora of local initiatives aimed at ways of regulating supplies in 'closed' (restricted) coffee shops requires a clear national policy framework and systematic research-based evaluation.
- Stronger, more consistent and more broad-based efforts are needed to tackle the development of the illegal drugs market and the associated threat to society from organised crime.
- Drugs policy requires a more comprehensive and permanent form of monitoring. Legislation should be enforced and lessons learnt more systematically. This will require clearer and more alert integrated political leadership as well as an adequately equipped authority that is better able to take an integrated approach to international coordination than is currently the

case. The 'drugs authority' proposed by the committee should prevent policy from becoming outmoded in future, and ensure that lessons are learnt where future policy is concerned.

• The committee questions whether the current system (with two schedules of drugs) can be maintained under the Opium Act, and recommends further study and an amendment to leg-islation introducing a single schedule" (Adviescomissie Drugsbeleid 2009).

Policy letter

In their Letter Outlining Drugs Policy of 11 September 2009, the Ministers of Health, Justice, the Interior and Youth and Families, largely adopted the recommendations of the Advisory Committee. This letter to the Lower House describes the implications of the evaluation and the Advisory Committee report for the current drug policy. The government says to intend to make major changes to some elements of this policy and has opted to discuss the main outlines with the Lower House before fleshing them out in a comprehensive document (T.K.24077-239). The plenary parliamentary debate on this policy letter is scheduled in the first quarter of 2010.

The government is opting for a comprehensive drugs policy that responds to change flexibly and dynamically, and, where possible, stays one step ahead of developments. To bring this about conditions must be improved. This will be achieved as follows, in accordance with the recommendations of the Advisory Committee on Drugs Policy.

- First, the main principles and objective of the policy will be redefined.
- Second, given the new principles and objective, and in the light of the report issued by the National Institute for Public Health and the Environment (RIVM) on the ranking of drugs, the classification system used in the Opium Act will be reviewed.
- Thirdly, the administrative structure within which drugs policy is shaped will be changed.

New drug policy objective

The new objective of the Dutch drug policy, as proposed by the government, is directly taken from the formulation by the Advisory Committee:

The goal of the [new] Dutch drugs policy is to discourage and reduce drug use, certainly in so far as it causes damage to health and to society, and to prevent and reduce the damage associated with drug use, drug production and the drugs trade (T.K.24077-239)..

The Advisory Committee questioned in more general terms the classification system used in the Opium Act, and the parameters for listing drugs in either schedule. It recommended factoring social harm, for instance the influence on school performance and the social marginalization of young people, into decisions on whether a substance should be controlled, and advocated appointing a committee of experts 'to look into this matter in more depth, and produce solutions and proposals for amendments to the legislation'. In this respect, one suggestion is to have a single list, thus eliminating the distinction in criminal law between Schedule I and Schedule II drugs. The government wishes to review the classification system in the light of its new objective for drugs policy. The proposed committee of experts (preferably members of an existing advisory committee) will be instructed to place their findings within the broad context of harm to health and society (including nuisance, crime and organized crime).

Ministerial team

A change in the objective of Dutch drugs policy will require a revision of the political and public administration structure. The Committee advised to establish a national drugs authority, but the Dutch government wants a structure that enables to respond rapidly to trends in society, promotes policy coherence and leads to as little bureaucracy as possible. Therefore, a ministerial team will be established forthwith to monitor the progress of drugs policy. It will comprise the ministers and state secretaries involved in drugs policy and will be chaired by the Minister of Health, Welfare and Sport. The team will be supported by an inter-ministerial project leader working with specialist civil servants from the various ministries involved. In making policy choices, the aim from now on is to link all relevant issues together. This comprehensive approach is needed to prevent a specific issue, for example crime, nuisance or health, from dominating decision-making, to the detriment of others. This does not mean that, for example, health protection through harm reduction will be less important (T.K.24077-239).

Use of drugs and alcohol by minors

To tackle the drug and alcohol problem, of young people the government proposes a cohesive package of preventive measures (see also chapter 3). The drug policy evaluation shows that selective, indicated prevention produces the best results. The Advisory Committee recommends a greater focus on this type of prevention. The government agrees with this conclusion and will tackle the drug problem among young people along the following lines: discouraging drug use, identifying problematic use at an earlier stage, alerting care services sooner, and limiting damage to health.

It is proposed by the government that specific provision must be made for the treatment of young addicts, who often also suffer from personality and behavioural disorders. That is why the government recently enabled 300 extra places to be created for clinical care specifically for this group. Half will have been created by the end of 2009, and all 300 places should be available in 2010. The Compulsory Mental Health Care Bill, which will replace the Psychiatric Health Care (Committals) Act, will present more opportunities for compelling or pressuring an individual to undergo treatment. Various interventions are possible, not only in closed institutions, but also in the form of outpatient programs. Minors who not only have serious developmental problems, which prevent them from maturing properly into adulthood, but who also have a drug or alcohol problem, may be detained in a secure youth care facility by order of the children's judge, so that they can undergo treatment. These facilities are also able to provide therapy for their addiction.

Dutch drugs policy is based on the notion that young people attending pubs, clubs, and other entertainment venues, whether they use drugs and alcohol or not, benefit most from a preventive approach comprising a cohesive package of measures, including information for the target group, measures specific to the setting, regulations, enforcement and assistance. This approach has produced some good results. Drug use at dance parties and other events has dropped, and the number of incidents involving recreational drugs such as ecstasy, amphetamines and cocaine has been declining since the 1990s. In the past few years, stricter measures, for example searching people for drugs at the entrance, have been taken at local level. This kind of intervention, involving both law enforcement officers and workers from addict care services shows both

sides of the government's approach – enforcement and care (T.K.24077-239). For more information: chapter 3.

New policy on coffee shops

Both the evaluation of the policy on drugs and the report of the Advisory Committee on Drugs Policy conclude that at user level, coffee shops have achieved their objective. To a large extent the markets for schedule I and schedule II drugs have been kept separate and consumers can use cannabis in relative peace and safety. In line with the drug policy document Continuity and change, policy is moreover geared to reducing the number of coffee shops, as well as the nuisance associated with them.

According to the government the Dutch coffee shop system attracts a great deal of criticism, both within the Netherlands and abroad, and the problems in certain border regions have by no means been diminished. The international controversy relates to the explicit impunity for the possession and sale of small quantities of soft drugs in the Netherlands. However, coffee shops, by their nature, operate on the fault line between legitimate society and the underworld. Their risk of becoming involved in more serious forms of crime has only increased in recent years. The government takes the position that the coffee shop policy needs reforming. The mere fact that such establishments pose a threat to the legal order entitles the government to impose far-reaching controls on their operations.

In years to come, the Dutch coffee shop policy will target the following objectives:

- 1. Re-establishing coffee shops as small establishments, geared to local users. Municipalities will be encouraged to carry out pilot projects in the coming two years and the projects will be evaluated after completion.
- 2. Restricting the number of coffee shops on the basis of the local situation.
- 3. Tying in with the integrated approach to fighting organised crime of all kinds.

Administrative law and criminal law will be deployed effectively and in a balanced manner.

The government will focus on achieving these three objectives. Under the terms of the Coalition Agreement, experimentation with regulated cannabis cultivation will not take place during this term of office. Moreover, such experimentation would touch directly on international obligations undertaken by the Netherlands. A policy survey of this topic would therefore not be expedient, according to the government.

In anticipation of the findings of the 'citizens-only' pilot project, a number of municipalities in Limburg will launch a project intended to restrict access to coffee shops, thus substantially raising the threshold for buying cannabis (introducing a pass system, restricting purchases to 3g per customer for all coffee shops, payment by bank card). These measures are expected to deter coffee shop tourists travelling to the Netherlands from afar to buy cannabis, thus reducing nuisance in the region and (it is presumed) improving relations with neighbouring countries.

Other Dutch municipalities are free to set up pilot projects of their own, under the strict proviso that their aim is to scale down coffee shops and to regulate the sale of cannabis. They should also work closely with the Association of Netherlands Municipalities. This type of project should preferably be trialed in a municipality which normally has very few, if any, foreign coffee shop tourists. The aim is to establish how much more effective a restricted system would be in regions where the situation is not distorted by foreign demand (T.K. 24007-239).

Pursuant to the 2008 Organised Crime Threat Assessment, tackling large-scale cannabis cultivation for the 2008-2012 period has been added to the list of priorities in efforts to combat organised crime (T.K. 24077-239).

The Court of Breda sentenced that the closing down of the coffee shops in the cities of Roosendaal en Bergen op Zoom is not a tort. So, they remain closed (www.rechtbank.nl)

1.3 Economic analysis

Expenditures on Opium Act crime

<u>NNIA.</u> In 2007 it has been estimated that the government spent about 716 million euro on combating drugs crime and prosecuting suspects on Opium Act charges (Moolenaar 2008). This estimate includes the costs of preventing and investigating Opium Act crime and prosecuting Opium Act criminals (see National Report 2008).

Expenditures on addiction care

In the Netherlands, an institute for addiction care or mental health care is financed by several sources. As a rule, regular institutes receive funding from the Ministry of Health, the Ministry of Justice, the provinces, the municipalities, the health insurance companies, additional temporary funds, and private funding.

Unfortunately, all these resources that flow to the addiction care are not labeled beforehand as to retrieve which amounts will actually be spent on addiction care, let alone treatment for drug addiction.

Nonetheless, the actual expenditures by the main institutes for addiction care are retrievable from their annual accounts. Table 1.1 gives an overview of these expenditures. From this table it can be estimated that the annual expenditures of the main regular institutes for addiction care, together with the institutes for integrated addiction care and mental health care, amount to about 1,133,085,718 euro. Unfortunately, it is not directly clear which part of this amount is spent on treating addiction, let alone drug addiction, and which amount is still missing from the non-merged mental health care.

Table 1.1:Expenditures by institutes for addiction care and institutes for integrated mental
health care and addiction care

Institute, year	Domain of care	Expenditures
JellinekMentrum, 2007	Addiction care and mental health care	124,978,000 EUR
Bouman GGZ, 2007	Addiction care*	58,757,027 EUR
Parnassia Groep, including Brij- der Verslavingszorg, 2007	Addiction care and mental health care	378,589,280 EUR
Centrum Maliebaan, 2008	Addiction care	30,968,422 EUR
Verslavingszorg Noord Neder- land, 2007	Addiction care	42,278,310 EUR
Tactus Verslavingszorg, 2007	Addiction care	46,750,557 EUR
IrisZorg, 2008	Addiction care and social relief	69,349,367 EUR
Emergis, 2008	Addiction care and mental health care	81,818,000 EUR
De Hoop, 2007	Addiction care	19,659,527 EUR
Novadic-Kentron, 2008	Addiction care	59,307,544 EUR
GGZ-groep Noord- en Midden- Limburg, 2007	Addiction care and mental health care	94,852,684 EUR
Mondriaan Zorggroep, 2008	Addiction care and mental health care	125,777,000 EUR
Total		1,133,085,718 EUR

*Although *Bouman GGZ* offers mental health care as well as addiction care, its actual clients are still mainly addiction clients. Source: <u>http://www.jaarverslagenzorg.nl</u>.

2 Drug use in the population

2.1 Drug use in the general population

Developments in drug use in the general population are monitored in the National Prevalence Surveys on substance use (see below). Data collection for the 2009 survey has not yet been finished. In February 2009, a small sale (internet) survey was conducted to assess current use of 'new' substances - GHB, Ritalin® and ketamine – in the general population. The results of this survey will be described at the end of this paragraph.

<u>NNIA</u>

In 1997, 2001 and 2005 nationwide surveys on substance use in the general population were conducted. Methods of data collection were different between surveys. Trend analyses were conducted only on data collected with the Computerised Assisted Personal Interview (CAPI). For more information about the methods, see National Report 2006 and Online Standard Table 01.

- Table 2.1 gives the lifetime and last year prevalence rates of drug use. The results show that the lifetime use of cannabis and ecstasy was higher in 2005 compared to both 2001 and 1997. Lifetime prevalence of ecstasy showed a steady increase between 1997 and 2005. For heroin a significant rise between 1997 and 2005 was found. The percentage of last year users of ecstasy also increased between 1997 and 2001, and remained at the same level between 2001 and 2005. Last year prevalence rates of the other drugs were fairly stable across the years.
- Incidence rates, defined as the percentage of first time users of all respondents in the past year, decreased between 2001 and 2005 for cocaine (0.4% and 0.1%, respectively) and amphetamine (0.2% and 0.1%, respectively). Changes in incidence rates of cannabis, ecstasy and heroin were not significant.
- Data on frequency of use are only available for cannabis. In 2005, 23,3% of the last month users reported daily or almost daily use (on 20 days or more). This is some 0.8% of the total population aged 15 through 64 years, or 85.000 (almost) daily cannabis users in absolute numbers. In the 2009/2010 survey, data are also collected on cannabis dependence, using DSM-IV criteria.

	Lifetime prevalence (%)			Last year prevalence (%)				
	1997	2001	2005	1997	2001	2005		
Cannabis	19.1	19.5	22.6 ^{b, c}	5.5	5.5	5.4		
Cocaine	2.6	2.1	3.4 ^{b, c}	0.7	0.7	0.6		
Ecstasy	2.3	3.2 ^a	4.3 ^{b, c}	0.8	1.1	1.2 ^c		
Amphetamine	2.2	2.0	2.1	0.4	0.4	0.3		
LSD	1.5	1.2	1.4	-	0.0	0.1		
Heroin	0.3	0.2	0.6 ^{b, c}	0.0	0.0	0.0		

Table 2.1:Prevalence of drug use (%) in the Dutch population of 15-64 years in 1997,
2001 and 2005*

Data collected by CAPI. * N= 17,750 in 1997; N= 2,312 in 2001; N=4,516 in 2005. a Significant change from 1997 to 2001. b Significant change from 2001 to 2005. c Significant change from 1997 to 2005. Figures in italics = less than 50 cases. Source: National Prevalence Survey, IVO (Rodenburg et al. 2007).

Cannabis: age and gender

- <u>NNIA</u> Table 2.2 shows that the percentage of recent cannabis users decreases with age. In 2005, one in ten young people between 15 and 24 years had consumed cannabis in the past year as against one in sixty seven persons between 45 and 64 years.
- There was a shift towards the higher age groups between 1997 and 2001. The percentage of young cannabis users (15-24) decreased while the percentage of cannabis users aged 25-44 years increased in this period. This shift may have resulted from a cohort effect in that some of the cannabis users from the age group 15 through 24 years in 1997 migrated to the age group 25 through 44 years in 2001.
- In 2005, the prevalence of last year cannabis use was about 2.5 times higher among men than women (7.8% as against 3.1%). This male-female ratio was smaller in previous years (almost 2:1). Apparently the gender gap is widening.
- The number of users of other drugs was too small to allow a breakdown.

Table 2.2:Last year prevalence (%) of cannabis use by age group in 1997, 2001 and 2005

Age-group (years)	1997	2001	2005
15-24	14.3	11.6	11.4
25-44	5.2	6.5	6.4
45-64	1.1	1.1	1.5

Source: National Prevalence Survey, IVO (Rodenburg et al. 2007).

Use of GHB, Ritalin® and ketamine

In February 2009 a sample of respondents from an internet panel called *Centerpanel* completed a survey on the use of GHB, Ritalin® and ketamine in the past 14 days (Meerkerk et al., 2009). The gross sample consisted of 2,441 people of 12 years and older and the net sample comprised 1,724 respondents (respons of 71%). After weighting for age, gender and level of education, data were representative for the native Dutch population; immigrants were underrepresented in the internet panel. The findings showed that none of the respondents had used Rita-lin® and ketamine in the past 14 days and only one respondent reported use of GHB in this pe-

riod (0,2%). Although standard prevalence measures (lifetime, last year and last month) were not assessed, these findings suggest that the use of these substances in the general population is fairly rare. Higher levels are reported in other (special) populations (see figures on special education, youth care and nightlife scene in § 2.2 and 2.3).

In conclusion, drug use in the general population remained fairly stable between 1997 and 2005. Yet, trends may be different in subpopulations (see 2.2 and 2.3) and at the local level. Moreover, there may be new developments between 2005 and 2009, which will be evident next year.

2.2 Drug use in the school and youth populations

Data on trends in drug use among pupils aged 12-18 years are available from the Dutch National School Surveys on Substance Use carried out every 3 or 4 years since 1988 (Online Standard Table 02). The most recent survey was conducted in 2007. In 2008 a survey was conducted as well among pupils of schools for special education. We will also add some information on cannabis use based on the ESPAD survey in 2007, because these figures attracted quite some (policital) attention (e.g. in the Ministerial letter sketching the outline of Dutch drug policy, see also § 1.2).

2.2.1 Regular secondary schools

<u>NNIA.</u> The pupils completed written questionnaires in the classroom. Random sampling occurred in two stages (first at the level of the class room and second at class level). The final net sample of respondents consisted of 7,550 students. In order to analyse trends, data from the different surveys were weighted with respect to gender, level of urbanisation and school type and school class. Until age 16, school attendance is fully compulsory; as of age 16 attendance is required only for unqualified pupils. As the higher school types are overrepresented among pupils of 17-18 years, the data for this age group are not considered to be representative for youth in general. Overall, the results showed that drug use among secondary school pupils increased between 1988 and 1996, and stabilised or decreased between 1996 and 2007 (see also Online Standard Table 02).

Trends in cannabis use

- Figure 2.1 shows that the lifetime and last month prevalence rates of cannabis use increased steadily between 1988 and 1996.
- Between 1996 and 2007, lifetime use decreased significantly. This decrease was apparent both for boys and girls but reached significance only for boys.
- Last month prevalence rates also significantly decreased between 1996 and 2007. Again, the difference was only significant for boys, although a decreasing trend is also visible for girls.
- In 2003 the gender gap as regards lifetime cannabis use had disappeared for the first time, but in 2007 lifetime use of cannabis was again more prevalent among boys than girls. Con-

cerning last month cannabis use the gender gap became smaller as well since 1996, but differences between boys and girls remained significant throughout the years.

• There were no major differences in prevalence rates between Dutch and other ethnic groups, except for a lower rate of lifetime use among Moroccan pupils (8.1% against 16.5% among Dutch pupils).





Source: Dutch National School Survey, Trimbos Institute (Monshouwer et al. 2008).

Cannabis and age (of onset)

Figure 2.2 shows that cannabis use strongly increases with age.

- At age 12 only few pupils have ever used cannabis: one in fifty (2.3%). At age 16, one in three pupils had ever tried cannabis (30%).
- The right panel of figure 2.2 shows that the percentage of current cannabis users increases until age 15 among girls and remains around 10% thereafter, while among boys a further sharp increase is observed in the higher age groups.
- The percentage of very young pupils (≤14 years) having ever tried cannabis decreased between 2003 and 2007 (trend significant for total and for boys separately). For example, LTP among 14-year old boys was 21% in 2003 against 13% in 2007.

Figure 2.2: Lifetime and last month prevalence (%) of cannabis use among pupils by gender and age in 2007



Source: Dutch National School Survey, Trimbos Institute (Monshouwer et al. 2008)

Frequency of cannabis use

Most pupils consume cannabis infrequently.

- Over half (55%) of the current cannabis users used cannabis on only one or two occasions in the past month (62% among girls, 46% among boys). Fourteen percent used cannabis on more than 10 occasions in the past month, more boys than girls (18% and 7%, respectively).
- Half of the current users (46% among boys, 57% among girls) smoked less than one joint per occasion, probably indicating that they shared a joint. Eighteen percent of the boys and 11 percent of the girls who were a current cannabis user smoked 3 or more joints per occasion.

Use of other drugs

- In general, the 2007 survey showed that prevalence rates of use of ecstasy, cocaine, amphetamine, hallucinogenic mushrooms and heroin were much lower compared to cannabis, with lifetime rates around 2%, while only 0.8% of the pupils had ever tried heroin. Last month prevalence rates are for all drugs below 1%.
- As for cannabis, the use of other drugs generally peaked in 1996 and decreased or stabilised since then. Ecstasy remains the most popular 'party' drug throughout the years, except for the last month prevalence in 2007, which was similar for ecstasy, cocaine and amphetamine (0.8%).

ESPAD 2007

The ESPAD survey in 2007 showed that within the EU-15 Dutch pupils of 15 and 16 years ranked quite high on indicators of cannabis use (current use: 15%; lifetime use 40 times or more: 7%). This increase in 'ranking position' seems to be related to the fact that cannabis use in this age group remained fairly stable between 2003 and 2007, while (sometimes remarkable) decreases were reported for many other countries. Moreover, it must be noted that figures on can-

nabis use among Dutch pupils aged 15/16 years in the ESPAD tend to be higher than those collected among pupils of 15 or 16 years in the same schools in the framework of the National School Surveys. The reason for this discrepancy is not known.

Other ESPAD data show that the proportion of pupils indicating that cannabis use is a great risk is lowest among Dutch pupils (11% for smoking cannabis one or two times; 12% for smoking cannabis occasionally and 52% for smoking cannabis regularly). Furthermore, the proportion of pupils indicating that cannabis is (very) easy available increased from 42% in 2003 to 49% in 2009. It is, however, not known if, and how, these variables are associated with the prevalence of cannabis use.

2.2.2 Special education

In the Autumn of 2008, a survey was carried out on schools of secondary special education, comprising three school types: i) 'leerweg ondersteunend onderwijs' (LWOO; providing additional support to those students who have special needs or other problems, but are capable of successfully completing their lower vocational education), ii) 'praktijkonderwijs' (PrO, 'practical education'), for those who are not expected to be able to successfully complete their lower vocational study, and iii) REC -4 schools for those who are who are uneducable or have specific problems, eg. psychiatric problems, chronic diseases. A stratified two stage random sampling procedure was applied to first select schools, followed by a random selection of classes within the participating schools (Kepper et al., 2009). A total of 63 schools participated (22 REC-4, 22 PrO, 19 Lwoo) comprising 2.629 pupils of 12- 18 years and 2.606 eligible questionnaires. Other methodological details are not yet available.

Table 2.3 shows the prevalence rates of drug use by age group. Comparisons are made with prevalence rates from the 2007 National School Survey on regular schools (see above). Figures for age group 17-18 years are excluded because they may be biased (see above). It is clear that drug use rates were highest among pupils from REC-4 schools. For example, 41% of the REC-4 pupils aged 16 had used cannabis in the past month against 13% of their peers from regular schools. There were no or only minor differences in drug use between pupils from Pro, Lwoo and regular schools, except for GHB (lowest rate among pupils from regular schools). In contrast, the prevalence of current alcohol use did not differ between school types, but the prevalence of binge drinking (consuming 5 or more glasses or more on one occasion in the past four weeks) was higher among pupils from all special school types compared to their peers from regular schools (not in table).

Age	Education	Cannabis		Lifetime prevalence				
Group		LTP	LMP	Cocaine	Ecstasy	Amphe- tamines	Heroin	GHB
12-13 y	Rec-4	20%	11%	1%	3%	3%	3%	5%
	Pro	5%	2%	2%	1%	1%	1%	6%
	Lwoo	7%	3%	0.5%	2%	1%	1%	5%
	Regular	4%	2%	1%	1%	1%	0,4%	0.3%
14-15 y	Rec-4	42%	23%	6%	10%	7%	4%	4%
	Pro	15%	6%	2%	3%	1%	2%	5%
	Lwoo	17%	7%	2%	2%	2%	1%	3%
	Regular	17%	9%	2%	2%	2%	1%	1%
16 y	Rec-4	54%	41%	13%	18%	12%	5%	7%
	Pro	19%	10%	3%	3%	2%	1%	4%
	Lwoo	25%	13%	2%	5%	2%	5%	4%
	Regular	30%	13%	3%	3%	2%	1%	1%

Table 2.3:Substance use by pupils at special and regular education by age group

LTP = lifetime prevalence; LMP = last-month prevalence. Special education: Rec-4 (institutionalized pupils), Pro (practical education), and Lwoo (supported education). Source: Trimbos Institute/Utrecht University (Kepper et al. 2009).

2.3 Drug use among specific groups

In previous national reports, it has been reported that higher levels of drug use, especially more intensive patterns of drug use, are found among socially excluded groups like certain ethnic minorities, neighbourhood and problem youth, homeless people, and prolific offenders. Apart from these marginalised groups, drug use is usually also higher among subpopulations of young people in the nightlfe scene. New information has become available for: i) nightlifers in Amsterdam and the eastern part of the Netherlands (quantitative and/or qualitative data); ii) ecstasy users (social context and behavioural aspects); and iii) substance use among youth in residential youth care (quantitative data).

Nightlifers

Substance use is associated with an 'outgoing lifestyle' and subsequently young people interviewed in nightlife settings tend to report higher levels of lifetime and last month use compared to similar aged peers in the general population (see also previous national reports).

The Antenne monitor combines *quantitative* data, from surveys among different groups of young people, and *qualitative* data, obtained from key informants (experienced nightlifers, profession-

als) in the nightlife scene. Moreover, qualitative data were collected on substance use among neighbourhood youth and problem youth in Amsterdam. For 2008, the guantitative part consisted of a survey among visitors of nightclubs in Amsterdam. A total of 2,867 people were asked to complete a short survey - consisting of some demographic information and a limited set of questions on current substance use. Thereafter they received a longer questionnaire to be completed at home (written or through internet). A total of 646 guestionnaires were returned yielding a response rate of 21%. The average age of the respondents was 25 years, 59% was female, 69% were native Dutch. Comparing demographic characteristics with those of the nonresponders only slight differences were found; non-respondents were less often female (49%), on average older - 7 months- and were less often native Dutch (65%). On substance use variables (lifetime and last month prevalence), the only difference was a slightly higher last month prevalence of ecstasy use among respondents (16% against 13%)¹. Table 2.4 shows the lifetime and last month prevalence as well as the prevalence of drug use during the night the survey was distributed. Similar surveys among clubbers were conducted in 1995, 1998 and 2003. Data for 2003 are included in table 2.4 as well. In general, drug use peaked in 1998, decreased in 2003 and remained generally stable between 2003 and 2008.

¹ The lower prevalence in the short questionnaire compared with the longer one (see table 2.4) may be due to underreporting but also to the fact that the short questionnaire was administered *before* the night out.

- The figures clearly show that cannabis is still the most popular drug, but the 'distance' between cannabis and ecstasy (and other drugs) is much smaller, compared to that in the general population.
- After cannabis, ecstasy remains the most popular drug, both in terms of last month prevalence as well as use during the night out. While prevalence rates strongly declined between 1998 and 2003, the number of pills consumed per night out remained stable at 1.5 to two. In most networks ecstasy is only consumed at parties or during holidays. Daily use is rare (estimated at 1% of the users) and is observed mainly among young nightlifers of 16-20 year.
- Compared to ecstasy, cocaine use is less bound to particular times and settings. The drug is taken most frequently in private settings, followed by clubs, dance events and pubs. The trend in prevalence between 1995 and 2008 shows the same pattern as that for ecstasy. Despite the drug's popularity, users report ambivalent attitudes as well. More than a quarter of the respondents felt they were sniffing too much cocaine or were doing it too frequently.
- Amphetamine continues to play a less important role in comparison to ecstasy and cocaine, and use of this drug is closely bound to certain alternative nightlife scenes, and may also be used at after parties and during working days. As described in previous reports, however, this situation does not reflect the situation elsewhere in the country, where the popularity of amphetamine may have increased (especially in rural areas).
- The use of GHB in the Amsterdam nightlife scene seems to be stable in the past years. However, there are indications for an increase in the popularity of this drug in other regions (north and eastern) of the country (see also below). According to the Antenna survey, GHB is generally consumed in private settings (e.g. afterparties) or in clubs, and some prefer to use the drug also on weekdays. 'Professional' users have a bottle of GHB at home. In some networks 'going out' seems to have normalised.
- Ketamine seems to have secured a firm foothold on the Amsterdam drugs market, although it is less popular than GHB. Ketamine is mainly used in the alternative dance and nightlife segments.
- Laughing gas is hardly used during a night out; it is mostly taken in private circles and small scale parties.
- 'Street drugs', like heroin and crack, are still not popular in the nightlife scene.
- With regard to polydrug use, it was found that, from the recent drug users, 78% combined cannabis with alcohol, 76% combined ecstasy with alcohol, 92% combined cocaine with alcohol, and 78% combined amphetamine with alcohol.

	Lifetim	ime prevalence Last-month prevalence		Night-out prevalence		
Substance	2003	2008	2003	2008	2003	2008
Cannabis	82.2%	83.1%	39.2%	39.1%	18.6%	17.2%
Ecstasy	52.7%	48.4%	19.4%	20.5%	8.2%	9.0%
Cocaine	39.4%	32.9%	13.7%	13.6%	3.0%	4.6%
MDMA powder	-	34%	-	8%	-	3%
Amphetamine	33.7%	23.7%	6.7%	6.0%	4.5%	3.6%
Methamphetamine	-	3%	-	1%	-	-
GHB	17.8%	15.7%	4.2%	4.7%	1%	2%
Ketamine	5.8%	8.5%	0.5%	1.6%	-	<0.5%
Laughing gas	-	24%	-	3%	-	-
Magic mushrooms	33.9%	31.6%	1.3%	1.6%	-	-
LSD	14.1%	8.3%	0.5%	0.2%	-	-
Poppers	36.1%	24.5%	6.8%	4.7%	2%	1%
Viagra		6%		2%	-	<0.5%
Crack	6.7%	4.6%	0.7%	0.6%	-	-
Heroin	2.2%	1.1%	0%	0%	-	-

Table 2.4:Substance use by Amsterdam clubgoers in 2003 and 2008

- = not recorded. Sources: Antenne 2003 (Korf et al., 2004); Antenne 2008 (Benschop et al. 2009).

Findings from a qualitative panel study ('Tendens 2008') in the eastern region of the country (province Gelderland) point at the increasing popularity of amphetamine among young people in smaller towns and cities (De Jong et al., 2008). Experimenting with amphetamine often starts in the nightlife scene but some users also take the drug during week days. Cocaine (sniffing) is still popular, especially in clubs and pubs, but after some years of an increasing trend, the use of this drug seems to have stabilised. Similar to the Antenna study, compulsive cocaine use has been observed among a minority of the users. The use of GHB has spread over various networks and is not restricted to largescale parties or dance events. Daily use is observed in networks of problem youth. Combining GHB with alcohol, reported in several networks, is associated with a high risk of ending up in a coma. There are also indications that the popularity of GHB use has increased in the northern region of the country, but survey data are not yet available (Quo Fadis, 2009).

With regard to other forms of combined use, or polydrug use, the Tendens 2008 has observed the occurrence of the following combinations:

- cocaine and alcohol;
- amphetamine and alcohol;
- cannabis and alcohol with amphetamine, cocaine, or ecstasy;
- alcohol, cannabis, and ketamine;
- cocaine and GHB;
- viagra, ecstasy, GHB, and cocaine.

A reason for polydrug users to combine alcohol with cocaine or amphetamine is to feel sober again after excessive drinking. As a side effect, however, such polydrug users may become rather aggressive which on its turn may result in harder confrontations with the police.
Ecstasy users

In the framework of the 'Netherlands XTC Toxicity study' (NEXT; see also previous National Reports and § 6.2), it has been investigated which factors predict whether young people will initiate ecstasy use, what motives and reasons they have for not using ecstasy, what the role of peers is in initiating and continuation of ecstasy use and whether long-term ecstasy use affects work and social relationships (Vervaeke, 2009). This was done by using both prospective and cross-sectional data.

- The results showed that the 'intention to start using ecstasy in future', low education and current weekly cannabis use predicted first ecstasy use, with the intention to use being the strongest predictor.
- Peer group ecstasy use did not predict first ecstasy use by ecstasy naive young people, but during the study period, the proportion of ecstasy using friends increased among novel ecstasy users, while remaining stable among persistent non-users.
- Rational reasons (knowledge of risks, no need for stimulant or other drug effects) were most important factors associated with not starting to use ecstasy. Feer of the effects of ecstasy and lack of opportunity to use or obtain the drug were less important.
- In initiating ecstasy use, peer influence (i.e. drug use by friend encourages drug use by others) was a dominant mechanism, while peer selection (selection of friends who have similar attitudes and behaviours) appeared to be uncommon. However, both peer influence and peer selection were involved in a dynamic way in the continuation of ecstasy use. The finding that friends can both restrain and encourage ecstasy use, may have important consequences for preventive interventions.
- Interviews with 29 experiences ecstasy users (average age 45 years) with a lifetime use of at least 250 pills, showed that the majority of them was not particularly career-minded, but twothirds was currently employed and more than half of the respondents had a current relationship for more than one year (almost all with a partner who also took ecstasy). Strategies respondents employed to prevent negative effects of their use on functioning were using flexible working hours and tempering their intake during busy periods. Limitations of this study include the cross-sectional nature (precluding determination of causality) and poly drug use, which might also have influenced (social) functioning.

Young people in residential youth care

Risk factors for substance use tend to accumulate among young people in youth care, but prevalence data on substance use in this group were lacking in the Netherlands. To fill this gap, the Trimbos Institute and the University of Utrecht conducted a survey among young people in residential youth care. In the Fall of 2008 all 48 Dutch residential youth care institutions that provide 24-hours day care for adolescents between the ages of 12-18 were invited to participate in the study and more than half of the institutions agreed to cooperate (54% response). Within each participating institution, all adolescents aged 12-18 years that lived in a 'family group' were invited to take part in the survey and 673 of them participated (response rate 72%). In order to compare prevalence rates of substance use in this group with those of pupils in regular and special education, the reported age range is set at 12-16 years (table 2.5; table 2.3).

The results showed that almost one in five adolescents of 12-13 years, and more than one in three adolescents in age group 14-16 years, was a current cannabis user. Moreover, one in four to one in six adolescents in age group 14-16 years had ever used cocaine and/or ecstasy and/or amphetamines. In general, cannabis use and lifetime use of other drugs among adolescents in youth care was more or less at the same level as that among pupils of REC-4 schools, and appreciable higher compared to pupils in regular education.

		Cannabis		Lifetime prevalence				
Age Group	Education	LTP	LMP	Cocaine	Ecstasy	Amphe- tamines	Heroin	GHB
12-13 y	RYC	33%	18%	6%	7%	5%	1%	2%
14-15 y	RYC	67%	36%	17%	15%	14%	2%	6%
16 y	RYC	69%	37%	18%	25%	17%	3%	7%

Table 2.5:Substance use by youth in residential youth care (RYC)

LTP = lifetime prevalence; LMP = last month prevalence. RYC = residential youth care. Source: Trimbos Institute/Utrecht University (Kepper et al., 2009).

3 Prevention

Most drug prevention programs that already existed have been prolonged but the targets of mass media campaigns have been widened to alcohol and youth health instead of illegal drug use. The national drug policy paper that is expected in 2010 will probably lay more emphasis on the necessity of working on negative norm setting on alcohol and drug use for young people in universal prevention programs. Selective and indicative prevention programs will probably be enforced.

New developments and trends regarding policies and interventions

Since 2006, a second Dutch policy paper on health prevention (*Preventie Nota*) has formally been the guiding principle for activities in health prevention, including drug prevention (see National report 2008). The focus for drug prevention today is on young people. A new centre has been initiated in 2007 in the field of youth and education, the Netherlands Institute for Youth (*Nederlands Jeugdinstituut*), One of the goals of this institute is enhancing the implementation of evidence-based lifestyle interventions. This centre is also meant to support the activities of professionals by maintaining a database on effective youth interventions, which describe the available interventions in the Netherlands with explicit judgments about their quality and coherence.

In September 2009, a policy letter- signed by four Ministers (Health, Welfare and Sport; Justice; Interior & Kingdom Relations; and Youth and Families) – was sent to the parliament (see § 1.2) presenting the outlines of a new national drug policy with a strong focus on drug prevention, especially among young people. The details of the new national drug policy are expected to be published in 2010 (T.K. 24 077, nr. 239, Sept. 2009).

In the policy outline letter, the ministers considered the drug situation in the Netherlands satisfactory when looking at the health risks and achievements of addiction care. However, the growing social impact of alcohol and drug use among young people was found to be worrisome. According to this policy letter, it is necessary to change the existent social climate that regards drug use and excessive alcohol use among young people as normal. The new and more protective drug policy is intending to explicitly discourage drug use, to support early detection of problematic drug use among young people, to refer people to addiction care as soon as possible, and (one of the traditional Dutch drug policy targets) to reduce drug-related health risks in general. In this 'drug policy letter', problem use of both drugs and alcohol are addressed in an integral manner. One of the measures considered is reducing the availability of alcohol and cannabis for this target group by setting a single age limit (i.e. 18 years) for purchasing these substances. For cannabis an age limit of 18 years for buying cannabis in coffee shops is already in operation; for alcohol this would mean that the age limit for buying low-alcohol beverages (i.e. less than 15%) would have to be raised from 16 to 18 years. Experiments at the local level with raising the age limit will be facilitated and thoroughly evaluated. In case of favourable results, a national age limit of 18 might be implemented. Further, universal prevention (preferably school-based prevention) is still needed to primarily inform parents and their children. The Healthy School and Drugs (see 3.1) should pay more attention to both the abnormality and risks of alcohol and cannabis use at young age. Stimulating early detection by parents of drug problems in their children and improving parenting skills is another priority of future

drug prevention policy. Moreover, many organisations in the field have a role in early identification of problem use of alcohol and drugs. In line with this, selective and indicated prevention efforts should be enforced. Furthermore, it is stated that the effectiveness of both drug prevention and treatment should be enhanced by improving coordinating mechanisms (not further specified) for the existent numerous organisations that are already working in this field.

These remarks are partly related to the fact that there are several organisations active in judging the quality of intervention in the broader field of health and youth. For preventive and treatment interventions in general, the National Institute for Public Health and the Environment (RIVM) has established the *Centre for Healthy Living* (Centrum Gezond Leven) which "focuses on strengthening the impact of local health promotion activities". Among others, the Centre for Healthy Living "assesses the quality and effectiveness of interventions using a national certification system with an independent council" (www.rivm.nl). Secondly and already mentioned above, the Netherlands Youth Institute (*Nederlands Jeugdinstituut*) has started a database on effective interventions on the domain of youth care and welfare several years ago. The criteria for judgment of effectiveness that are used in these organisations are different from those in (for instance) the Cochrane Collaboration or in medical sciences in the Netherlands. Based on the delivery of new data and new results from effect studies, this Database Effective Interventions is updated constantly. The Healthy School and Drugs for instance, has been judged as "sufficiently theory-based" on a 4-point scale running from "well described", via "sufficiently theory-based" and "probably effective" to "sufficiently effective".

3.1 Universal prevention

Integrated universal prevention of drug use among younger people (8 to 25 years) is made possible by several (established) programs, but also some new ones are emerging. The most important (older) examples are: the Healthy School and Drugs; Clubs, Alcohol & Drugs; Alcohol and Education; Open and Alert; and annual public campaigns on alcohol and drug use. Most of these are regularly updating their strategies and materials (Van Hasselt & Hoek, 2008).

The oldest school-based drug prevention program, the *Healthy School and Drugs,* consists of an intervention mix of several lectures dealing with alcohol, tobacco and cannabis, given in the last forms of primary schools and in secondary schools. Additional interventions are school policies on drug use, and case finding and support of at-risk students. New elements include an improvement of the parent modules and the addition of an e-learning module.

An old quasi-experimental evaluation only showed a significant lower proportion of alcohol users in the experimental group compared to students of the participating control schools. For cannabis and tobacco users, no significant effects were found (Cuijpers et al., 2002). A new evaluation of the effectiveness of this program on students *illegal* drug use has not been carried out. However, the results of a cluster randomised trial on the effects of this program on students *alcohol* use have been published recently. In this study 3,490 first-year students (and their parents) in 152 classes in 19 secondary schools in the Netherlands participated. Data for 2,937 students (84%) were eligible for analysis (Koning et al., 2009). The parent intervention was based on a Swedish program and aimed at encouraging parental rule setting concerning their children's alcohol consumption. The student intervention was based on the theory of planned behaviour and social cognitive theory, and consisted of four digital alcohol lessons based on the alcohol module of the Healthy School and Drugs. The effects of these two interventions were compared with a regular high school curriculum. During the first follow-up (10 months after pre-test) only the combined student-parent intervention showed significant reductions in heavy weekly drinking and frequency of drinking. At second follow-up (22 months after pre-test) these results were replicated. The authors suggest that both the adolescents and their parents should be targeted in order to delay the onset of drinking, preferably before the onset of weekly drinking. A similar evaluation will be carried out with regard to cannabis use.

The program Clubs, Alcohol and Drugs (*Uitgaan, Alcohol en Drugs*) is the follow-up of Going Out and Drugs (Uitgaan en Drugs) that was operating during the past years. Its underlying assumption is that drug prevention effects are increasing when standardized activities are targeted at young people in different ways, for a longer period and in different situations (at home, at school and in recreational settings). Clubs, Alcohol and Drugs offers supportive "instruments" for a healthy and safe regional and local drug policy in recreational settings. These instruments are developed and periodically renewed by the Trimbos Institute in cooperation with organizations of addiction care and municipal health services. Interventions and materials are brochures, a website (www.drugsenuitgaan.nl), education courses for personnel working in these settings, a short course on First Aid for drug emergencies, and a Scanner that supports a quick scan of drug problems in a specific area. New are several factsheets that are meant to support important stakeholders, e.g. owners of clubs and bars, public administrators of municipalities, and professionals working in addiction care. Stakeholders can choose the instruments that fit their situation. A helpdesk of the Trimbos Institute supports regional and local organizations in implementing this program and it also organizes meetings on these subjects (Van Hasselt & Hoek, 2008). A recent and separately constructed information sheet stipulates the risks of polydrug use in recreational settings (Van Leeuwen & Faes, 2009).

Annual mass media campaigns targeting drug use have been running since the mid nineties. Due to a change in national health prevention targets, the annual cannabis campaigns have been discontinued (see National report 2008, § 3.4). In accordance with the new prevention policy with broader targets than merely illegal drugs, campaign messages on cannabis will be integrated during the next years in (broader) public health lifestyle campaigns for young people (Van Hasselt, personal communication).

The foundation Educare is still the leading Dutch organization for first aid at events, and specialised in preventive and supportive activities in case of drug-related incidents during those events. Professionals of this organization can be hired for giving support during recreational events. These first Aid stations (run by physicians, nurses and paramedics) are operative on the spot, to reduce health problems that may occur during big dance parties. An observational study was published about self-referred patients of medical support services on house party's that were legally organized during the nine years (1997-2005). The study revealed that during the 219 dance parties with an estimated total of three million participants, 23,581 patients visited these stations (patient visits because of headaches were not included). The authors state that this study is unique because in no other country legal dance parties are organized on this scale. The medical usage rate (MUR) (making use of medical aid during these parties) varied from 59-170 patients per 10,000 dance participants. The mean stay at the station was 18 minutes (\pm 46 minutes). During the total period, 38% of the health problems were related to drug use (especially ecstasy), and most were mild. Fifteen cases of serious incidents were observed with one death. Long term effects were not investigated (Krul et al., 2009).

3.2 Selective and indicated prevention

The Dutch Strengthening Families Program (*Gezin aan Bod*) tries to improve mental health of children and parenting skills of the parents with substance abuse problems, by changing unfavourable parent behaviours, improving communication between parents and children, and creating a "positive" family atmosphere. The program is also assumed to prevent substance use (see National reports 2007 and 2008). Unfortunately, the randomised controlled trial (a four-months family intervention versus no intervention) with a six-months follow-up has been ended (Speetjens, 2008). This was due tot several problems. First, the number of participating organisations of addiction care was too small, causing a shortage of participants (sample size). Second, coordinated funding arrangements during the trial could not be realised for the participating organisations. There was also resistance against the RCT-design within organisations (refusing treatment to allocate clients to a control group). Recruitment and intake of families was considerably delayed, e.g. due to a lack of good cooperation with youth care organisations. After one year of intensive preparation, only five of the thirteen organisations that were asked to participate, actually appeared to be able and willing to do this (Bool et al., 2009).

Several Dutch prevention projects are targeting disruptive problems in childhood and behavioural and substance use problems in adolescence and adult life. Research showed that problems (e.g. disruptive behaviour or emotional problems) at an early age are strong predictors of problematic behaviour at later age, e.g. higher risk of substance abuse, criminality and other behavioural problems in adolescence and adulthood (Coie, 1996; Loeber & Farrington, 1998; Sanders et al., 2003; O'Connell et al., 2009; De Graaf, 2009).

Two projects have been described in previous National Reports. The first is the *Parent Management Training Oregon (PTMO)*, which is gradually implemented in the Netherlands for parents of children (4-12 years) with disruptive behaviour disorder (Lamers 2007). The second is the experimental *Coping Power Program* that offered cognitive behavioural therapies for children and manualised behavioural interventions for parents during a RCT to improve parenting behaviour and reduce disruptive child behaviours (Zonnevylle-Bender et al. 2007).

A third project is the (from origin Australian) *Triple-P program* (Positive Pedagogical Program). Triple-P offers five levels of low threshold parent support, depending on the needs of parents of children (0-16 years) and extra modules for specific parent groups. The main target of Triple-P is enhancing family protective factors and reducing those risk factors known to be associated with severe behavioural and emotional problems of pre-adolescent children. This program fits in the above-mentioned theoretical scheme but it is not explicitly directed at substance abuse problems. It is currently implemented and tested in mental health care. The effectiveness of this program in reducing substance abuse problems remains to be studied. Yet, the available evidence is pointing at effectiveness of Triple-P in different countries, cultural contexts, parental behav-

iours and situations and child problems (Sanders et al., 1999; De Graaf et al., 2008; De Graaf, 2009; Nowak et al., 2008; Blokland, 2007).

A fourth project is the *Good Behaviour Game (GBG)*, a preventive classroom-based intervention for 7-10 year old pupils, targeting a reduction in disruptive behaviour problems, in smoking and in alcohol problems at later age (10-13 years). Alcohol problems appeared to be comparable at pre-test among both the GBG-group and the non-participant group, whereas tobacco problems and disruptive behavior problems were reduced (Van Lier et al., 2004; Van Lier et al., 2009).

Other interventions are targeting more specific parent groups. An estimated 1,6 million children under 22 years have parents with psychological and/or drug dependence problems. These children are at high risk for developing later (substance use) problems (Van der Zanden et al., 2009). Preventive parenting programs have been active for several years (Van Doesum et al., 1995; Van Sambeek et al., 2003). Recently an online course has been developed for this target group, aiming at the enforcement of protective factors, e.g. by improving parenting competence or skills. This is assumed to improve the psychosocial welfare of their children. The five targets of this course are: improving the parent-child interaction; supporting the parent without these problems; creating a supportive network or a confidential advisor for the parent without these problems: improving coping skills of the child: and developing a clear view of the situation by the child itself (Van der Zanden et al., 2008). The interventions included eight chat sessions with course leaders and other participant parents, and read-and-learn tasks for at home. Changes in parenting skills were measured via both standardized and self-constructed instruments. A prepost evaluation study showed considerable drop out at post-test (52 of the initial 69 participants). Therefore the findings should be interpreted very cautiously. There were indications that participating parents and professionals were both very satisfied with the online course. After the course, parents experienced significantly less parenting problems but no significant changes in child behaviour were measured. Nonetheless, behaviour problems among the children, which showed clinical significance at pre-test, were reduced to a clinical non-significance level after the course (Van der Zanden et al., 2009).

The first results of the effects of a current peer education project using information and entertainment have been published (Van der Spek & Noijen, 2009). This study used a nonrandomised controlled trial and the content of the interventions were (again) based on the theory of planned behavior. During the intervention ("the Cannabis Show") information about cannabis and cannabis use was exchanged with the (young) public by trained peers using entertainment and discussion. This was done by three peers playing different roles: the *host* is seriously involved in conveying information about cannabis and cannabis use; the *side kick* acts as a cannabis user and loosely poses questions to the host, while the host answers, explains and tries to persuade the side kick to change his behavior. Finally, the third peer-educator facilitates the discussion by walking with a microphone amidst the young participant crowd, enabling them to answer or react. Several methods (e.g. a quiz and role play) are used for showing and discussing different determinants of cannabis use, e.g. attitude, norms, self-efficacy, intention to use and (actual) cannabis use. For example, in order to stimulate knowledge transfer a knowledge quiz is used, presenting four propositions that can be considered right or wrong. This is done by two students, each representing half of the participants in the room. The participants may give these students some advice. The winner is rewarded with a gadget. The methods used are separated by rap- and dance acts, a stand-up comedian and a kick box demonstration.

This intervention has been carried out six times on nine locations of a specific school for young people with behavior and other disorders in Amsterdam. Of the 485 students that participated in the cannabis show, 134 were both pre-tested (two weeks before the intervention) and post-tested (one week after the intervention). There were 65 participants in the intervention group and 69 in the control group. Follow-up measurements are not yet reported. The post-test results show that knowledge increased significantly (both amongusers and non users of cannabis) compared to the no-intervention control group. Self-efficacy also was significantly higher at post-test than in the control group. No substantial effect was found on intention-to-use, but the self-reported reductions of actual cannabis use among participants in the intervention group at post-test were significant. The number of last-week users was reduced to 50% of the pre-test number, while cannabis use in the control group increased. All significant effect sizes (Cohen's d) were big or moderate. In-depth interviews among participants showed that 96% thought that the intervention (the Cannabis Show) was worthwhile participating in and that 64% had learned something from it (ibid.).

A recent focus of national drug policy are people with light mental retardation (*licht verstandelijk gehandicapten*) because exploratory studies showed that drug use among the members of this group (both inside and outside institutions) is significant, and may be more harmful in this vulnerable group (Bransen et al., 2008). Three educational leaflets (on cannabis, alcohol and Amphetamine Type Stimulants) have been developed for the younger ones themselves and one for their parents. A pilot is running to test an intervention program for this target group.

The *Drug Information and Monitoring System (DIMS)* is initiated in 1992 for monitoring and surveillance of the quality of drugs delivered by consumers (see former national reports), and to take preventive actions if necessary (see § 10.2 for more information). DIMS does not give insight in drug-related emergencies among drug users. For this purpose, a pilot study to develop and test the feasibility of a drug emergencies monitor was carried out in 2009 (see also § 7.1). The results were positive and a continuation of the monitor is foreseen.

Since 1996 a National Drugs Information Line (*Drugs Info Lijn*) offers objective information and an individual counselling service on drugs and drug use via the telephone and delivers on request free leaflets on this subject. Since 2002, a website is also in operation enabling contacts via e-mail. Chatting services, in most cases attracting younger people, started in 2005. Mail- and chat-contacts are mostly directed at specific questions on drugs, while the questions posed via the telephone line are often partners or parents asking for help (see former national reports). Since 2008 the line is combined with an Alcohol Information Line and a quick scan showed that this combination may have supported an increase in efficiency of the line. More requests have been answered with less personnel. In 2008 the Drugs Information Line received 8,739 telephone calls, indicating a gradual reduction since 2005. Most questions were answered via the automatic Voice Response System, which gives general information about drugs and how to order drug information leaflets. In contrast, the website and the e-mail and chat services became more popular. The number of unique visitors of the site has increased to 198,806 in 2007. The Drugs Information Line answered 935 e-mails (compared to 1,044 e-mails in 2007 and 289 in 2006) and 128 chat messages (compared to 236 in

2007 and 123 in 2006). Due to a lack of funding, the chat service has been stopped since mid 2008 (Kok, 2009).

Research

Several dissertations have been published in 2009 on ecstasy use (see also § 2.3 and § 6.2). One covers the neuropsychological effects of ecstasy use, i.e. verbal memory deficits (Schilt, 2009). A second is focussed on interactive effects of the combined use of ecstasy and alcohol or of ecstasy and cannabis (Dumont, 2009). One of the research questions of a third dissertation on the social context and behavioural aspects of ecstasy use, covered the implications of the reported research findings for drug prevention and education (Vervaeke, 2009). The effective-ness of prevention or delaying of ecstasy use would be increased when messages take into account the fact that ecstasy users are calculating the benefits, risks and harms of it. Pleasures should therefore also be acknowledged in preventive messages, instead of exclusively focussing the preventive message on the risk and harms. Social networks and peer education are corner-stones in this predominantly 'educational' process, because peers may have both a stimulating and restrictive impact on ecstasy use (see also § 2.3).

E-health interventions

There is no new information on e-health interventions directed at prevention of substance use. For e-health treatment interventions: see chapter 5.

4 Problem drug use and the treatment demand population

4.1 **Prevalence estimates**

Cannabis, ecstasy, and amphetamines

<u>No New Information Available</u>. There are no recent data available on the number of problem users of cannabis, ecstasy and amphetamines.

Problem hard drug use (opiates and cocaine): national estimates

Since the last national estimate of the number of problem hard drug users in the Netherlands pertains to the year 2001, it has been planned to update this estimate as soon as possible. This will be done by updating estimates based on the treatment multiplier (TM) and multivariate social indicator method (MIM), and also to apply a national three-sample capture recapture analysis on police data, probation data, and treatment data. This latter method has not been applied on national level before; because of possible data limitations this exercise should be seen as explorative. In order to apply (and improve) the TM, it was necessary to establish new estimates of intreatment rates (defined where as the proportion of drug users recorded in LADIS). This has been accomplished by field work in eight regions in the Netherlands (Amsterdam, Rotterdam, The Hague, Utrecht, Groningen, Enschede, Eindhoven, Heerlen). Following an Amsterdam study, it is intended to distinguish between problem hard drug (mainly opiate) users and "hard drug users" in methadone treatment, who function fairly well, do not use heroin or other hard drugs, and are in this sense not problematic anymore (Buster et al. 2001). Currently, 572 hard drug users have been recruited (on the street and at various locations known to attract drug users) and in-treatment rates are calculated separately for opiate users and crack cocaine users. Preliminary findings suggest a decrease in the number of opiate users compared to 2001, but methodological differences may preclude precise comparisons between 2001 and 2009. The final results will be uploaded in Fonte as soon as they have been approved by our expert committee on prevalence estimates.

<u>No New Information Available</u>. Table 4.1 lists the national estimates of the number of problem hard drug users based on surveys conducted several times in the past years. For the 2001 estimate, three methods were used, namely the multivariate social indicator method (MIM) (or regression imputation), the multiple imputation method (on the same data), and the treatment multiplier (TM). These methods yielded a central estimate of about 33,500 problem drug users, which implies 3.1 problem drug users per 1,000 inhabitants aged 15 to 64 years (range 2.2 – 4.3). Due to the large confidence intervals, the estimate for 2001 did not differ significantly from the previous estimate for the year 1999. For this previous survey the number of problem drug users per 1,000 inhabitants aged 15 to 64 years.

Site	Year	Method	Case definition*	Estimates (lowest- highest)	Source
National	1993	Multiple	Problem opiate users	28,000	(Bieleman et al. 1995)
National	1996	Treatment multiplier MIM	Problem opiate users	27,000 (25,000 - 29,000)	(Toet 1999)
National	1999	Treatment multiplier MIM	Problem opiate users**	29,213 (25,970 - 30,298)	(Smit et al. 2001)
National	2001	Treatment multiplier, MIM, Multiple imputa- tion***	Problem hard drug users**	33,499 (23,773 - 46,466)	(Smit et al. 2006)

Table 4.1: National estimates of the number of problem hard drug users*

MIM=Multivariate (social) indicator method. *Mainly opiate users who also consume crack cocaine (and other substances). **Variable case definitions of local estimates (anchor points) used by MIM. Mainly problem opiate users, who usually also consume crack. Yet, some anchor points – especially of the latest estimates - also include small numbers of primary crack cocaine users who do not consume opiates. Treatment multiplier is based on opiate users only. ***The MIM and the multiple imputation were based on local estimates for the years 1998 - 2002. Therefore, in contrast to the multiplier method, this estimate does not accurately refer to '2001'.

Problem hard drug use: local estimates

Table 4.2 gives an overview of the estimates of the number of problem hard drug users in various cities and regions in the Netherlands. For some of these estimates the capture-recapture method has been applied. In these cases the number of problem users may have been overestimated because of a violation of the closed population assumption. For example, an estimate for the number of opiate users in Amsterdam in 2004 based on a 3-month observation period (with less risk of migration, death, etc.) yielded 3,524 persons, compared to 3,928 persons based on a 1-year observation period (Van Brussel et al. 2005).

New information has become available for 2007 for the city of Apeldoorn (ST7_2009_NL_01), for 2007 for the city of Enschede (ST_2009_NL_02), and for 2008 for the city of Amsterdam. By means of capture-recapture analyses the numbers of problem opiates users were estimated at about 432 for Apeldoorn (Van Zwieten et al. 2008), 591 for Enschede (Kruize et al. 2008), and 2,913 for Amsterdam (Buster, personal communication). Per 1,000 inhabitants aged from 15 up to 64 years this respectively amounts to about 4.2, 5.5, and 5.3 problem opiates users.

City or region	Year	Method	Case definiti- on*	Estimates (lowest – hig- hest)	Source
Amsterdam	2008	2-sample C-RC	Problem opiate users	2,913	Municipal Health Service Amsterdam (Buster, personal com- munication)
Rotterdam	2003	3 times 2-sample C-RC	Problem hard drug users	5,051 (4,804 - 5,298)	(Biesma et al. 2004)
The Hague	2000/ 2002	3-sample C-RC	Problem hard drug users	3,200 (annual)	(Burger 2007)
Apeldoorn	2007	2-sample C-RC	Problem opiate users	432	(Van Zwieten et al. 2008)
Friesland*** (pro- vince)	2001	2-sample C-RC, treatment multiplier	Problem opiate users	1,007	(Biesma et al. 2003)
Enschede	2007	2-sample C-RC	Problem opiate users	591	(Kruize et al. 2008)
Hengelo	2005	2-sample C-RC	Problem opiate users	200	(Bieleman et al. 2007)
Almelo	2006	2-sample C-RC	Problem opiate users	200	(Bieleman et al. 2007)
Stedendrhoek ****	2000	2-sample C-RC, treatment multiplier	Problem opiate users	750 (561 - 948)	(Bieleman et al. 2002)
South-Limburg	1999/ 2002	1-sample C-RC (Chao's estim.) (a.o.)	Problem hard drug users	1,100	(Coumans et al. 2002); (Hoebe et al. 2003)

Table 4.2: Local and regional estimates of the number of problem hard drug users

*Problem opiate users often consume other substances as well (especially crack cocaine). Problem hard drug users consume opiates and/or cocaine and other substances. Compared to Amsterdam, broader inclusion criteria have been applied in Rotterdam and The Hague. **Estimates for the region/province are based on extrapolations from local estimates (cities). Parkstad-Limburg: 800. ***Leeuwarden: 389; North-Friesland: 135; South-West Friesland: 169, Friese Wouden: 314. **** Deventer, Apeldoorn, Zutphen. C-RC = capture-recapture. Samples come from treatment and police data.

Figure 4.1 gives the estimated number of problem hard drug users per 1,000 inhabitants aged 15 to 64 years at national level and for some cities and regions. The local estimates show that the highest concentrations of problem hard drug users were found in Rotterdam and The Hague. Besides actual differences, the differences that were found between the cities and regions will also be due to variations in case definitions. In particular, the differences between the three largest cities Amsterdam, Rotterdam, and The Hague should be interpreted with great caution. For Amsterdam, the estimates are restricted to the problem opiate users. Compared to Amsterdam, however, broader inclusion criteria have been applied in Rotterdam and The Hague.

Among homeless problem drug users in Amsterdam it was found that between 35% and 40% use only crack cocaine (Buster, Municipal Health Service Amsterdam, personal communication, 12-07-2007). Adding these percentages to the rate of 5.3 for the problem opiate users, it can be

estimated that in total, when including problem opiate and problem crack cocaine users, there will be between 8.2 and 8.8 problem drug users per 1,000 inhabitants aged 15 to 64 years in Amsterdam. After including the problem crack cocaine users, Amsterdam comes more in line with The Hague where a rate of 10.1 was found. Moreover, in Rotterdam the case definition applies to the whole group of regular hard drug users. The group of problematic drug users (almost daily users, who were criminal and/or causing nuisance and/or homeless and/or had psychiatric comorbidity) was about one-third smaller. Although the wider definition more closely matches the EMCDDA definition of problem drug user, the more restrictive definition might be more in line with definitions in other cities.

Figure 4.1: Estimated number of problem hard drug users per 1,000 inhabitants (15-64 years) at national level and for some cities and regions



Sources and definitions: see table 4.1 and 4.2. Different case definitions and methods will have affected the comparability of the estimates.

Declining number of opiate addicts in Amsterdam

Estimates for the number of opiate addicts in Amsterdam are available since 1985. Figure 4.2 shows the estimated numbers broken down by country of origin.

- Since 1988 the estimated number of opiate addicts has declined (with a minor fluctuation in the early nineties). The largest decrease can be attributed to the group of foreign opiate users (category 'born elsewhere', including Italians and Germans), but in the past years the size of all groups has diminished.
- In 2008, the total number of opiate addicts was estimated at 2,913 (one-year observation period). Of these opiate addicts 50% were born in the Netherlands, 26% in Surinam, the Netherlands Antilles, Morocco, or Turkey, and 25% were born elsewhere. Addicts of the first and second subgroup usually have a residence permit and maximum access to (methadone) treatment.



Figure 4.2: Estimated number of opiate addicts in Amsterdam by country of origin

Problem opiate users: those who have medical and/or judicial problems and/or have difficulties controlling their addiction. Estimates based on 2-sample capture-recapture applied to data from the Central Methadone Register (CMR). Source: Municipal Health Service Amsterdam.

Injecting drug users

<u>No New Information Available</u>. The number of drug users who are currently injecting their drug can be estimated from treatment data reported to the National Alcohol and Drugs Information System (LADIS), in combination with the estimated number of problem hard drug users at national level. According to the LADIS, 10% of the opiate clients in 2005 injected their drug. There were 16,199 clients who had a primary or a secondary problem with opiates. This implies that there were about 1,620 currently injecting opiate users in treatment.

There were 11,652 clients in treatment with a primary or a secondary cocaine or crack problem, who were not yet counted among the clients with a primary or secondary problem with opiates. Of these cocaine/crack clients only 1% injected, whereas 59% smoked, and 40% sniffed the drug. The approximately 4,661 clients who snort their cocaine are less problematic and less marginalised and are not included in the estimated number of problem hard drug users at national level. Of the remaining 6,991 problematic cocaine/crack users who are in treatment, about 117 clients are estimated to be injecting drug users.

All in all, these figures from the opiate and cocaine/crack clients imply that, of the 18,643 problem hard drug clients in treatment, about 1,737 currently inject, which comes down to about 9.3%. Given the estimated number of about 33,500 problem hard drug users at national level, it is then assumed that there are about 3,115 currently injecting problem hard drug users in the Netherlands, within a range of 2,210 to 4,320 injectors. Given the total of 11,008,282 inhabitants aged from 15 to 64 years in 2005, it is thus estimated that among the general population, 0.03% are current injectors of hard drugs, within a range of 0.02% to 0.04%. As argued in § 4.1 of the National Report 2006, these figures may be an overestimate as some local studies suggest that drug users who seek treatment may be more problematic and more often injecting drugs compared to those outside treatment.

Problem cocaine users

<u>NNIA.</u> There is no reliable estimate of the number of problem cocaine users. Roughly, three groups of problem cocaine users can be distinguished: 1) Traditional problem users of opiates, most of whom (some 80%) also use crack cocaine, either as a primary or secondary drug; applying this percentage to the estimated number of 34,000 problem hard drug users, some 27,000 problem crack users belong to this group; 2) primary crack users who do not consume opiates and 3) the relatively more integrated group of people who mainly sniff cocaine (hydrochloride) (see also chapter 12, National Report 2006). Prevalence estimates for the last two groups are missing. A recently started study financed by ZonMw aims, among others, to estimate the size of the total population of crack users in the three largest cities (Amsterdam, Rotterdam, and the Hague) using capture-recapture methods and multiplier techniques (Van den Brink et al., 2008).

4.2 Data on PDUs from non-treatment sources

Field research in 2008 and 2009

During 2008 and 2009, field research has been conducted among problem drug users in the four largest cities of the Netherlands and in four provincial towns spread throughout the country. A total of 571 problem drug users were interviewed, 104 problem drug users in Amsterdam (Buster et al. 2009), 101 in Rotterdam (Schoenmakers et al. 2009b), 102 in The Hague (Schoenmakers et al. 2009a), 66 in Utrecht, 50 in Groningen, 51 in Enschede, 50 in Eindhoven, and 47 problem drug users were interviewed in Heerlen (Biesma et al. 2009).

The respondents were mainly sampled by means of targeted sampling at public places and lowthreshold services. Initially, it was also planned to perform a snow-ball sampling, but the experience with this method soon showed that problem drug users tend to give priority to other matters than showing up on the agreed time and place with a fellow respondent. The targeted sampling remaining as the main way of sampling, it was taken care of that the sampling took not place at situations in which the respondents would be in treatment automatically. Otherwise, the in-treatment rate would be overestimated. When sampling respondents it was checked first by means of a questionnaire whether a respondent was indeed a problem drug user according to the definition of "problem drug user". About this definition consensus was reached in the meeting of the National Working Group on Problem Drug Use in 2007. A problem drug user was then defined as follows:

- having used opiates or crack cocaine on at least three days a week during the past month;
- showing criminal behaviours, having psychiatric problems, causing public nuisance, or having an unstable accommodation.

Demographic characteristics

From the total of the problem drug users who were interviewed, 85% were male and 15% were female, 18% were younger than 35 years and 82% were 35 years and older. With regard to the substances involved in the problem use, 77% of the respondents used opiates, sometimes in combination with crack cocaine, and 23% of the respondents used crack cocaine without using opiates. This indicates that 77% of the respondents belong to the traditional group of opiates users and that 23% of the respondents belong to the new group of crack cocaine users who did not start with opiates as their first drug.

In-treatment rates

By means of the field research it was investigated which percentage of the problem drug users had been in treatment during the past year at an institute for addiction care and treatment that delivers its data to the National Alcohol and Drugs Information System (LADIS). This percentage was labelled the "in-LADIS rate". Although it gives an indication about the percentage receiving specialized addiction care, the in-LADIS rate does not cover the total in-treatment rate. Care for problem drug users outside the regular specialized addiction care, for example at a social relief offered by the Salvation Army, is not included in the in-LADIS rate. This implies that the total in-treatment rate, when taking treatment in a broad sense, will actually be higher than the in-LADIS rate.

For the male problem drug users the in-LADIS rate was 76% (95% confidence interval 72-80%) and for the female problem drug users the in-LADIS rate was 83% (95% confidence interval 76-91%). Given the overlap between confidence intervals, these figures indicate that there is no statistically significant difference between the percentage of male and female problem drug users receiving specialized addiction care.

Older problem drug users, however, more often seem to receive specialized addiction care compared to the younger ones. For the problem drug users younger than 35 years the in-LADIS rate was 67% (95% confidence interval 58-76%), compared to 79% (95% confidence interval 76-83%) for the problem drug users being 35 years and above. This finding confirms previous findings indicating that, when growing older and getting more and more problems, drug users more often come for treatment. This pattern explains that drug users in treatment may show more problems than drug users outside treatment, notwithstanding the fact that treatment in general improves the condition of the drug users.

A more striking difference has been found between the in-LADIS rate of the problem opiates users and the in-LADIS rate of the problem crack cocaine users. The in-LADIS rate of the problem opiates users was 87% (95% confidence interval 84-90%), compared to only 41% (95% confidence interval 33-50%) for the problem crack cocaine users. Data for the crack users

should be interpreted with some caution as their number within sample was relatively small. However, these differences suggest that the problem opiates users receive specialized addiction care appreciably more often than problem crack cocaine users. To explain this difference, a part of the explanation may be that the problem opiates users form an ageing group that has more problems forcing them more often into treatment. Another part of the explanation may be that, for the problem opiates users, substitution treatment has been available for years, whereas a pharmaceutical substitute for cocaine is still under its way. Methadone was a successful substitute to persuade problem opiates users into treatment. For the problem crack cocaine users, such a substitute is still in need of being discovered.

4.3 Intensive or frequent patterns of use

Cannabis

Data on frequency and intensity of cannabis have been reported in § 2.1 and § 2.2. Data on the prevalence of *cannabis use disorders* in the population of 18-64 years will be available in 2010.

In 2008, the Trimbos Institute and University of Amsterdam started a cohort study in order to determine risk factors for the transition from regular cannabis use to dependence and factors predicting the 3-year course of cannabis dependence. For the first baseline assessment, 350 regular (at least 12 days/month) cannabis users who are not dependent, as well as 250 cannabis dependent users, have been recruited. Preliminary findings show that in the total sample of 600 regular/dependent users about one-third (32%) was a daily cannabis user, over one-third (37%) had used on 5-6 days per week in the past year and nearly one-third (31%) had used on 3-4 days per week in the past year.

In 2008 the Amsterdam Antenna monitor carried out a survey among visitors of clubs (Benschop 2008). The data showed that 39% had used cannabis in the past month; of this group 21% uses cannabis (almost) daily, 23% uses cannabisweekly or only during the weekend ad 55% uses cannabis only occasionally. About one in five (22%) was categorised as a *risky cannabis user*, which was defined as dailyuse, or consuming more than one joint on several days or more per week. This was 8% of all respondents. Over one fourth (27%) of the last month cannabis users now and then thought they smoked cannabis too much and/or too often.

GHB

There are indications that the prevalence of GHB dependence has increased in some subpopulations, but figures are lacking.

Prevalence estimates of last year dependence on cocaine, ecstasy, amphetamine (proxy measure, based survey including questions referring to DSM IV criteria) among visitors of clubs and large-scale parties will become available next year. Estimates will be made by drug type.

5 Drug-related treatment

5.1 Strategy/policy and new developments

Recent developments

The increasing attention of drug policy for treatment (and prevention) of drug problems among young people has continued and a similar development can be traced in research funding and activities for this target group (e.g. by the Dutch Health Research and Development Council (*ZonMw*) and by the national program Scoring Results (*Resultaten Scoren*) (see chapter 3 and § 5.2.2). Not only in drug prevention but also in treatment, increasing attention is paid to young people, especially for cannabis dependence.

Due to increases in the number of clients with GHB dependence and the seriousness of withdrawal symptoms, one addiction care organisation developed a protocol for detoxification. This is based on a controlled administration of gradually decreasing doses of GHB, combined with benzodiazepines to ease the kick-off process.

5.2 Treatment systems

5.2.1 Organisation

No important changes have been realized in the organization of addiction care during the past year. As reported previously, during the past decade many mergers took place in Dutch mental health care and addiction care for economic reasons. From a patchwork of 60 regular organizations of addiction care in 1993, nine regional organizations remained in July 2007. Two other organizations are part of a regional mental health care organization (Hilderink et al. 2008). Additional organizations that take care of addicted persons are the municipal health services, general psychiatric hospitals, and several religious organizations. Finally, there are private addiction clinics (Croes et al. 2009).

Private clinics meet the need of a relatively high-SES subpopulation that is not interested in participating in regular addiction care. This subgroup was initially referred to private care services in other countries (e.g. Scotland). The first Dutch initiatives were realized by cooperative arrangements between foreign investors and regular organizations of addiction care. Initiated by five organizations of addiction care, recently a new ("starred") private clinic opened its doors and another one will be opened in January 2010 in the Caribbean.² These clinics do not participate in public registration systems and there are no data on the annual numbers of clients, nor on the content, quality and effectiveness of treatment. It is generally assumed that these clinics attract drug dependent people with a (well-)paid job who are mostly also socially active (Van Laar et al. 2009). The National Health Inspectorate started in 2008 supervision activities targeting the quality of care given in these clinics (T.K.24077-227). Some interventions that are fairly commonly applied in those clinics, e.g. the twelve-step model or Minnesota approach, were initially meant for alcohol dependence. Although the evidence for effectiveness of this type of treatment is still insufficient, the support for it appears to be considerable. It is nowadays also tried out and ap-

² Psy Nieuwsbrief, February 25th, 2009 (<u>www.psy.nl</u>); Schramade M., Het Parool October 10th 2009.

plied for problems with illegal drugs, prescription drugs or gambling. Recently this type of treatment, combined with self help groups is also offered by the Jellinek.³

5.2.2 Quality assurance

The program Scoring Results

The 10 years old policy program Scoring Results was initiated by the Ministry of Health, Welfare and Sports in order to increase the quality of drug prevention and addiction care. The first two phases were evaluated in 2003, 2005 and 2008 (for details we refer to several older national reports). The program resulted in many different products, e.g. systematic research reviews, guidelines, protocols, handbooks and modules. During ten years the program was funded by the Ministry of Health, Welfare and Sports, with considerable co-funding of both the organizations of addiction care themselves and many studies have been funded by the Dutch Health Research and Development Council (ZonMw). It is foreseen that Resultaten Scoren becomes a new Knowledge Institute (*kennisinstituut*). In 2009 the responsibility for the program was granted to the Netherlands Mental Health Care Organisation (*GGZ Nederland*). The foreseen Knowledge Institute will continue to develop and update instruments and furthermore sets the target to improve the public image of Dutch addiction care in our own country and abroad. For 2009 the impetus lies on addiction care for young drug users, drug prevention and inpatient addiction care (*GGZ* Nederland 2009).

Protocols for treatment of adults with drug dependence will be translated for treatment of younger people. This treatment protocol should count for all substances and includes engagement of the environment of the young client as a part of treatment.

A literature review of the *supply of inpatient treatments* showed a considerable diversity of criteria for treatment choice, treatment targets, target groups, treatment programs (content and intensity) and evaluation structure (Damen et al. 2006). This diversity hampers an estimation of the minimal capacity necessary for inpatient addiction care. It also hampers insight into professional education needs, and the possibilities for a cost-effectiveness analysis. A national study is running for describing standards for (especially inpatient) treatments. Furthermore, a treatment monitoring system will be developed for increasing the transparency, transferability and exchange of experiences with treatment interventions (GGZ Nederland 2009).

Quality of web-based treatment

Nowadays the starting point for Dutch health insurance companies in deciding what treatment costs should be reimbursed and what not, is whether there is sufficient evidence for its effectiveness or not. In general, these and other treatment programs, e.g. treatment for dependence on prescription drugs (sedatives)⁴ or for mental health problems, are increasingly offered via the internet. Still, it remains unclear to decide for professionals referring clients to care and the clients themselves which program they should choose, because the effectiveness is in most cases still not sufficiently known. The Trimbos Institute currently works on a quality mark and on guidelines for web-based treatments. These products are not exclusively dealing with effects,

³ www.jellinek.nl

⁴ See <u>www.cannabisenik.nl</u>; www.benzodebaas.nl

but also with user friendliness and with checks for how clients are associating with online therapies. The quality mark should be ready for implementation in 2010.

Benchmarking pilots

The intention of the program Scoring Results is to set up a benchmark system for treatment of addiction problems in young people, comparable with that for adult clients. A pilot version of this benchmark (Outcome Bench) has been running during the past years in four treatment centres. Recently a dissertation was published including several studies on benchmarking activities in outpatient treatment facilities of four Dutch organizations of addiction care (Oudejans, 2009). The response rate in one of these studies, covering the feasibility of a feedback system and the validity of the collected data, was low. Thirty of 93 professionals who initially participated, filled in and returned all questionnaires, i.e. from pretest to the third feedback session. It appeared to be possible to implement a system for *Routine Outcome Monitoring* or ROM (the intervention) with low costs, using a call center for feedback interviews with clients. However, this method is sensitive to selection bias, limiting a valid interpretation of the results for the total population that has been treated. The low response rate could be increased when client administrative systems would be regularly updated and administrators are trained in using these. Improvements in future client tracking could reduce these problems and improve possibilities for generalizing the use of telephonic follow-up interviews (Oudejans et al., 2009b).

Another study showed that participating professionals and managers appreciated the feedback and considered these relevant. This implies that one of the main requirements for learning from (benchmarked) outcomes information was met. However, some other requirements (factors that stimulate participation and implementation) were not met yet in the majority of the cases (see below).

The third study deals with *the effectiveness of Routine Outcome Monitoring for clients with alcohol problems*. This study showed the outcomes of two evidence-based outpatient psychotherapeutic interventions, but the dropout rate appears to be too high (48%) to draw reliable conclusions. Besides, further studies should be conducted for clients with illicit drug problems.

What can be said about the contribution of Routine Outcome Monitoring to the learning capacity of professionals and management? Based on the theory of Senge (1990) on Learning Organisations, a questionnaire was constructed. The author found no increases in learning capacity after feeding back the integral treatment outcomes to the participant professionals. Several revisions of the questionnaire were proposed. Another explanation suggested by the author, was that the frequency and intensity of the feedback sessions were insufficient for creating a learning environment for treatment professionals in addiction care.

Factors that influence *the participation of professionals in Routine Outcome Monitoring* in the evidence-based Lifestyle Trainings were the subject of another study. Support of the management and colleagues and sufficient material conditions (including time) appeared to be important beneficial factors. Engagement of management and colleagues and the perceived interest of implementing ROM can be both limiting and beneficial factors. The authors suggest that partici-

pation may increase when the management of these organizations would be more convinced about the importance of ROM before starting to implement it, and when professionals have more time (money) to fill in the client questionnaires (Oudejans et al., 2009a).

National performance indicators

Besides the activities resulting from the program Scoring Results, quality of care is also starting to be measured in the broad field of mental health care (including addiction care) via several performance indicators. Performance indicators are measurable aspects of care that give indications about quality, safety, efficiency and accessibility of care (Wollersheim et al., 2007). Periodically reporting about the state of the art concerning indicators primarily serves as moments of attention and reflection on where an organization stands and what should be done. It may also be used as a warning when current situations are compared with pre-determined normative values.

A basic set of indicators was constructed (Stuurgroep Transparantie, 2007) and this set is currently tried out. Furthermore, a short paper was published that gave practical suggestions for using specific instruments to determine the client's drug use and quality of life and how to use these outcome measures (Spits et al., 2008).

Client safety

Safety is an important part of quality of care. A recently finished pilot project is aiming at the development of instruments and strategies for determining 'unintended harm' in mental health care and addiction care. A draft 'trigger list' has been constructed to be used in a retrospective study of patient files. The list was partially based on an existent list that has been used for judging medical patient files in hospitals. In this retrospective study, patient files were judged in two phases with separate forms. The first judgment phase was done by nurses, the second by psychiatrists or medical specialists. The second judgment also included brief descriptions of the context, the damage or harm, the effects of it, and proposals for improvement. Finally, the participants also had to judge the quality of each patient file on a 10-point scale (ranging from "very bad" to "very good"). File-quality scores and the number of triggers found appeared to be nonrelated. Adverse events were found in 6 of the 181 files (3.3%) that were judged in the second phase. This percentage was somewhat higher in addiction care (5.4%). The results of this pilot are not meant to be generalized to Dutch addiction care or mental health care. Working with the trigger list is an intensive procedure, thus it should be further developed to improve its efficiency as a screening instrument. The report mentions several possibilities for improvement (Peeters et al., 2009).

Training and education

In July 2009 a special chair in biological-psychological research among young drug dependents has been established at the Radboud University of Nijmegen.⁵

⁵ www.ivo.nl

5.2.3 Diversification of treatment

Drug-free treatment

Compared to the former national report, there are no new developments in drug-free treatment. It is still uncommon as an isolated treatment option for opiate addicts. On the other hand drug-free treatment is common for treating dependence on other substances, due to the absence of effective pharmacological treatment options (cf. Martell et al. 2009). There are no specific admission criteria for these drug-free treatments and the focus is still on young drug users and on effective treatment modalities for cocaine and cannabis users (Solowij et al. 2008).

A guideline and protocol for treating young cannabis users

A general treatment guideline and protocol, and an accompanying exercise book for professionals in addiction care working with young people with cannabis problems have been published. They cover the important sequential phases of treatment (e.g. recognizing and formulating the problem, preparation and decisions, treatment targets, consolidation of treatment results and relapse) and basic information on cannabis (e.g. definitions, background, phases of cannabis use, treatment modalities and techniques) for professionals (Buisman 2009; Ivens et al. 2008; Ivens 2008). These publications are the first in a series meant to be published by the program Scoring Results (see § 5.2.1) for treatment of young drug users.

At the same time one organization of addiction care (*Brijder Verslavingszorg*) published a short report on epidemiological data on cannabis use, registration data on cannabis dependent patients and treatment. The report was commissioned by the municipality of The Hague and confirms the earlier reported national trend, treatment demand is rising among young cannabis users (Van Laar et al., 2008; Beuker et al. 2001; Dijkhuizen et al. 2008).

The International Cannabis Need of Treatment study (INCANT)

Currently a study is running targeting the introduction and implementation a comprehensive treatment modality for cannabis dependence at a younger age, that has been shown effective in the American context. Three treatment services (including one addiction care organisation) in the Netherlands participate in the international INCANT experiment, that tries to gather evidence for effectiveness of MultiDimensional Family Therapy (MDFT or briefly "Multidimensional Therapy") in the European context (see National Reports 2007 and 2008). The trial runs till 2010 and the first publications are underway.

In June 2009 470 adolescents and parents had been recruited for this trial in the five participating EU countries. Ninety-seven participants are from the Netherlands. In the Netherlands the first course to train professionals started in February 2008 with 39 participants in eight teams from different organisations of addiction care, mental health care and youth care. In January 2009 another eight teams started and in September 2009 the third wave will follow. The success of the Dutch training program was an important reason for the other participating countries to start their own training programs (Rigter et al., 2009).

Treatment for cannabis using schizophrenia patients

For the subgroup (one third) of cannabis using patients with recent onset schizophrenia, the usually applied early intensive interventions are not working due to non-compliance and little

insight of clients into their illness. Therefore, within the Adolescent Clinic of the Amsterdam Medical Center, a Family Motivational Intervention (FMI) was developed and currently evaluated (Smeerdijk et al., 2009). The intervention has three components: 1) two sessions psychoeducation; 2) six sessions Interaction Skills training (Gordon) that has been developed and practiced in the Netherlands in the last five years for parents of patients with schizophrenia, and 3) six-sessions Motivational Interviewing (MI) to enhance motivation among parents for teaching sessions on parenting skills. Target outcomes are: reduction of cannabis use; increasing medication compliance; increasing well-being among parents; decreasing stress within the family related to the schizophrenic disorder; and improving the communication between parent and child.

In a randomized controlled trial, 98 carers of 75 patients with schizophrenia and co morbid cannabis use were assigned to either FMI or psychoeducation only (PE). Baseline and follow-up measures by the patients and their caretakers were done by a researcher who was blinded for the allocated condition. The first follow-up measurements (3 months after the last session of FMI) are promising. The response was 94% in the FMI group and 78% in the PE group. For the patients the response was 71% in the FMI group and 77% of the PE group. Compared with the PE group, the FMI group showed significant more decrease in mean days of cannabis use and in mean grams of cannabis use, both during the last three months. The groups did not differ significantly in the increase in compliance with medication. In both groups, carers (family members) significantly improved in all outcomes (burden of disease, style of coping and mental health). Based on these positive results for carers and patients, FMI was continued in the Adolescent Clinic. In 2008 FMI was also implemented in another healthcare service in the region of North Holland, and in 2009 meetings were organised to check the possibility of implementing FMI in a second mental health care organisation (Jellinek Mentrum).

Intensive community-based care

For people with complex addiction problems the number of units for low threshold intensive community-based care (bemoeizorg) has substantially increased. In 2005 around 170 of these care programs existed. This development has predominantly been initiated by the field itself. It concerns a type of outreach treatment that exists next to other facilities e.g. dual diagnosis treatment units (see § 7.3) and care that is part of the "Specific Approach Social Support" (SASS) for people with complex and persistent problems (see § 8.2). Intensive community-based outreach is offered (although not asked for) to difficult to reach target groups, dual diagnosis clients and those drug users who cause public nuisance. General goal is to improve the quality of life and to reduce public nuisance. Several methods or strategies are used, and until now no consensus exists on parts that are unique for this type of care (Kroon, 1996; Roeg et al., 2007). In everyday practice, the organization of intensive community-based care takes different forms, e.g. a multidisciplinary team, case management, a specific unit in an existent organization of addiction care, or cooperation between several organizations (social insurance companies, housing corporations). Activities or services of different organizations or professionals are united in an individual package of care. Thus the organizational and professional requirements for this type of care are high (Roeg et al., 2008a; Roeg et al., 2008b). The effectiveness of separate parts of intensive community-based care is currently evaluated and will be reported in 2012.

Case management

The aim of case management is to create and optimize the working relationships between client and professionals (Tielemans & De Jong, 2007). Case management may often be an option for organising intensive community-based care (see above) but also in other multi-problem clients and consequently also more complex treatment options. During the past decade it is used (and evaluated) in the much broader context of mental health care (Wolf et al., 2002; Vanderplasschen et al., 2007). Due to the complexity of the problems of many chronic drug users, case management is considered highly relevant for efficiently taking care of this target group.

An earlier publication reported on **what** case managers should do in a care program for chronic drug users (GGZ Nederland, 2003). A recent guideline presents information on **how** to do this (Tielemans & De Jong, 2007). Main subjects are research results, inclusion criteria for clients, different views on drug dependence, construction of a basic care program, parts of the basic program to be taken care of by case managers (entering care, inventory phase, analysis, realisation, evaluation, exit phase) and areas of attention (e.g. physical health, self care, dealing with crises and with different mental health problems, taking care of social networks, and housing).

Finally, a recent (narrative) literature review gives insight in main characteristics of different models of case management and tries to determine the effectiveness of these models. Forty-eight publications were selected from 36 original studies. Most dealt with the effectiveness of intensive case management (ICM), strength-based case management (SCM), generalist case management (GCM), and assertive community treatment (ACT). Studies with methodological stronger research designs failed to show sufficient evidence for effectiveness of case management, particularly over a longer period. Looking at differences between the studied case management models, the authors report that some evidence about the effectiveness of ICM and ACT for homeless and dual diagnosis clients could be traced. SCM and GCM appeared to be relatively effective for substance abusers in general. Positive outcomes mainly concerned a reduction of drug use by inpatients, an increased utilization of community-based services, improved treatment retention, improved quality of life, and high client satisfaction (Wolf et al., 2002; Vanderplasschen et al., 2007).

Self help groups

An Information and Development Centre for Self Help Groups and Addiction was initiated in 2003 to familiarise addicted people with self help and to enhance the cooperation between self help groups and regular addiction care. Research in 2004 showed that self help for addiction problems is considered unpopular among professionals in Dutch addiction care. During the past years, the number of contacts and activities increased, information leaflets were distributed, and a formal agreement for cooperation between self help groups and regular addiction care was signed by several institutions (Muusse et al., 2008; Muusse, 2009; Muusse & Van Rooijen, 2009). In February 2009 a congress on this subject was devoted to effective ways of encouraging contacts between self help and regular addiction care (Symposium on self help and addiction, 2009).

Web-based treatment

The Netherlands has a high density of internet connections and during the past decade, webbased interventions in the fields of prevention, cure and care of (mental) health problems have increased substantially. In the field of drug prevention and addiction care, a similar development is found; first in the form of drug prevention sites and later also by options for web-based treatments (see also former national reports).

Several Dutch addiction care organizations developed internet modules for treatment of problematic use of cannabis and party drugs (ecstasy and GHB).

- Initiated by the program Scoring Results and based on a literature review and a brief survey among the target group, an online self help program has been developed for adolescents with problematic cannabis use (<u>www.watwiljijmetwiet.nl</u>; <u>www.cannabisondercontrole.nl</u>; <u>www.cannabisdebaas.nl</u> and <u>www.jellinek.nl/zelfhulp/cannabis</u>)
- This program is based on cognitive-behavioral therapy principles. From the 546 persons that entered internet treatment, 47 participants completed it and participated in the evaluation. Thus the outcomes are probably seriously biased. The evaluation showed that almost all 47 full-participants stopped or substantially reduced cannabis use. Favorable outcomes were also measured for psychological and social problems, and work-related problems (Dijkstra, 2009).
- Other examples of self-help and treatment sites are <u>www.drugsondercontrole.nl</u>; <u>www.cannabisdebaas.nl</u> and <u>www.jellinek.nl/zelfhulp/cannabis</u> (Van Laar et al., 2008).
- Until now few evaluation studies have been undertaken to determine the effectiveness of, and dropout rates and patient compliance in web-based drug prevention and treatment of addiction (Croes & Van Gageldonk, 2009).

Withdrawal treatment NNIA

Substitution treatment

Medical heroin prescription

In 1998 two medical evaluation studies started targeting the effectiveness of medical heroin prescription for a limited group of opiate addicts. The results of both studies were published in 2002. The Central Committee on the Treatment of Heroin Addicts (CCBH) recommended the experimental application of this treatment on a larger scale. In June 2004 the national government funded the realisation of this extended experiment. On December 20th 2006, a preliminary step was taken, i.e. heroin was registered as a general medicine, creating possibilities for general prescription. By the end of 2008, 17 units in 15 different municipalities, with a total of 715 places were operational for a selected group of patients and under specific conditions. Recently a national policy directive was published, enabling general practitioners to legally prescribe heroin to opiate addicts. This last step preludes the end of the experimental stage of medical heroin prescription and marks the transition to a formal medical treatment for a selected group of opiate addicts (see also §1.2).

Research

A literature review tried to determine the effectiveness of two interventions that are increasingly applied in Dutch addiction care during the past years. Both therapies (Dialectic Behaviour Therapy and Emotional Skills Training) were initially developed for people with borderline personality disorder (BPD). Research shows a relationship between BPD and drug dependence and the authors suggest that problems with emotional regulation and impulse control are manifest in both BPD and drug dependence. It was hypothesised that both therapies may be effective for both problems. Five studies among female patients from two research groups showed high methodological quality. This was considered insufficient for drawing conclusions about effectiveness, but the results pertaining to Dialectical Behaviour Therapy were promising for this specific dual diagnosis group. The evidence for effectiveness of Emotional Skills Training for this target group is still insufficient (Fleurkens et al., 2009).

A quick screen instrument for substance use disorders (the CAGE-AID) was tested in 190 Dutch treatment-seeking adolescents in mental health care (12-18 years old, 53% males) and their parents (Couwenbergh et al., 2009). The results showed that this scale is a brief and valid instrument and showed excellent diagnostic accuracy in predicting substance abuse disorder in this target group. The usefulness in other settings still has to be determined.

5.3 Characteristics and trends of clients in treatment

Specialised addiction treatment

The National Alcohol and Drugs Information System (LADIS) is the most comprehensive information system in the Netherlands about clients in addiction treatment. The LADIS contains data from the regular drug treatment services, including probation services, and has nation-wide coverage. During the past years, most regular organisations for outpatient treatment merged with the regular organisations for inpatient treatment within their region. As a result of these mergers, the majority of clients are now registered at a central intake location. Some private clinics and those institutes for mental health care that have not yet merged with an organisation for addiction treatment, are not represented this far in the LADIS.

The data in this paragraph are based on the protocol for the Treatment Demand Indicator (TDI) as established by the EMCDDA (Standard Table TDI_2008_NL_01). This means that only those clients who have had at least a second face-to-face contact with an addiction counsellor are included. Moreover, the TDI only includes data from clients who subscribed in the year of registration. The TDI does not include subscriptions from a previous year that were continued in the registration year. Subscriptions within the registration year include clients that subscribed for the first time in their life for a drug problem (first treatments), as well as clients that resubscribed in the registration year. The TDI controls for double counting of persons. These criteria are more restrictive than the criteria applied by the holder of the LADIS, the Organization Care Information Systems (IVZ), to assess the annual LADIS Key Figures (Ouwehand et al., 2009). The figures presented here will therefore deviate from the figures reported elsewhere.

Some further observations should be made:

- Data will be reported from 1994 onwards, since this is the first year for which IVZ is able to control for double counting.
- The coverage of the system in terms of participating services has improved over the years. The small relative increase in opiate clients from 2000 to 2001 is mainly due to the participation of the Municipal Health Service Amsterdam (GGD Amsterdam) in the LADIS since 2001.
- "Cocaine" refers to both "cocaine HCL" and "crack cocaine".

Trends

Between 1994 and 2007, the annual number of new clients applying for help at the drug treatment services varied between eight and eleven thousand, with an increasing trend (although with some fluctuations) over the years, which has been levelling off in the past four years. Figure 5.1 shows the distribution of the new clients from 1994 to 2007 for the drug that was the primary problem for these clients.





* Selection of clients based on the EMCDDA TDI protocol. Source: LADIS, IVZ.

Figure 5.1 shows the following:

- The percentage of opiate clients among new drug clients decreased from 62% in 1994 to 20% in 2007. The percentage of cocaine clients increased from 17% in 1994 to 38% in 2003, and declined slightly thereafter to 32% in 2007.
- Since 2003, the proportion of cocaine clients exceeds the proportion of opiate clients.
- The proportion of cannabis clients increased from 14% in 1994 to 37% in 2007.
- When taken separately, the ecstasy and amphetamine clients never accounted for more than 6% of the new drug clients. However, the proportion of amphetamine clients is on the rise in the past years, from 1.5% in 2001 to 5.9% in 2007.

The shift in ratios among the primary drugs is even more visible in clients who have entered treatment for the first time. These first treatments reflect the incidence of drug users seeking help, and may be a better indicator of recent developments in problem use. Among the first treatments in 2007, the proportion of opiate clients was only 12% compared to 29% for cocaine clients and 45% for cannabis clients. The proportion of first treatments related to amphetamines was 7%.

Age

For the different drugs, figure 5.2 shows the distribution over the age groups of the clients in 2007. Clients seeking treatment for problem use of opiates, hallucinogens, and cocaine, are on average the oldest. Clients who have a primary problem with ecstasy, amphetamines, or cannabis are on average the youngest.





* Selection of clients based on the EMCDDA TDI protocol. Source: LADIS, IVZ.

Gender

The percentage of females among all the new drug clients has varied over the years between 16% and 19%. Figure 5.3 shows the gender distribution by primary drug in 2007. The proportion of females was highest among the hallucinogen clients (38%), followed by the amphetamines clients (23%), and the ecstasy clients (22%). The proportion of females was the lowest among the cannabis (18%), opiate (17%), and cocaine (13%) clients.



Figure 5.3: Gender distribution by primary drug of clients recorded in 2007 at centres for addiction treatment*

* Selection of clients based on the TDI protocol. Source: LADIS, IVZ.

Route of administration

According to the TDI (LADIS, IVZ), injecting drug use among all the new primary drug clients strongly declined from 12% in 1994 to 1% in 2007. Among opiate clients a decrease was found from 16% in 1994 to 9% in 2007. In 2007 the main route of administration for opiates was smoking or inhaling (74%). Of the cocaine clients, 40% smoked or inhaled and 59% sniffed the drug. These different routes of administration probably reflect two different groups of problem cocaine users. On the one hand there are the problem users of crack cocaine, who often also consume other hard drugs like opiates. On the other hand there are the 'recreational' cocaine users who have run into problems because of compulsive snorting (Stichting IVZ, 2006). Cannabis is mainly smoked (99%), while amphetamines are sniffed (75%) as well as swallowed (19%).

GHB

During 2008 and 2009, some institutes for addiction care signaled an increase in the treatment demand for GHB. National figures about this treatment demand are not available yet, since the treatment demand for GHB is registered in the LADIS as of 2009 (Van Laar et al., 2009). None-theless, some figures are already available from some institutes for addiction care (<u>www.psy.nl</u>, 21-10-2009):

 For the northern provinces of Groningen, Friesland, and Drenthe the institute for addiction care "Verslavingszorg Noord Nederland" reports an increase from 22 GHB-clients in 2007 to 62 GHB clients in 2008 and already 48 GHB clients in only the first half of 2009. The mean age of the GHB clients is 27 years and something more than half is male.

- For the province of Gelderland the institute for addiction care "Iriszorg" reports an increase from only 2 GHB clients in 2004, to 12 in 2007, 35 in 2008, and already 36 GHB clients in the first half of 2009. A majority of the GHB clients is between 16 and 24 years.
- For the province of North Brabant, the institute for addiction care "Novadic-Kentron" reports an increase from about 50 GHB clients being in treatment in the second half of 2008 to about 80 GHB clients being in treatment in 2009.

General hospital admissions

Admissions to a general hospital in the Netherlands are recorded via the Dutch Hospital Registration (LMR). Figure 5.4 shows the number of clinical admissions to a general hospital because of drug dependence or abuse as a primary or a secondary diagnosis.

- In 2007, the LMR recorded a total of 1,790,683 clinical hospital admissions, which increased to 1,850,726 admissions in 2008. In that year drug dependence and drug abuse were recorded only 642 times as a primary diagnosis and 2,386 times as a secondary diagnosis.
- Within the category of admissions related to drug abuse and dependence, opiates made up 12% of the primary and 23% of the secondary diagnoses. Other illicit drugs accounted for 45% of the primary and 54% of the secondary diagnoses. In this category, cocaine ranked as the most frequent drug, followed by cannabis. Psychoactive medicines (e.g. benzodiazepines) and unspecified substances accounted for 43% of the primary diagnoses and 23% of the secondary diagnoses.

Figure 5.4: Number of admissions to general hospitals related to drug dependence or nondependent drug abuse (ICD-9 codes 304 and 305.2-9) as primary diagnosis (left) or secondary diagnosis (right), from 1998 to 2008



Other 'illicit' drugs include amphetamines, and hallucinogens. Source: LMR, Prismant.

Trends

The number of admissions related to drug abuse or dependence as a primary diagnosis remained rather low over the past years. Minor increases were seen for cannabis (24 in 2000 and 57 in 2008) and cocaine (67 in 2000 and 131 in 2008). A stronger increase was observed for the number of admissions with drugs as a *secondary* diagnosis.

- This trend was mainly due to cocaine and to a lesser extent to cannabis. More specifically, cocaine dependence and abuse as a secondary diagnosis increased from 377 in 2000 to 617 in 2008.
- The number of cannabis related admissions was lower and more variable over time, although an overall increase in secondary diagnoses was observed from 193 in 2000 to 476 in 2008.
- The number of admissions related to opiates as a *secondary* diagnosis varied between 476 and 674 cases annually (542 in 2008), with a tendency to decrease over time.

Table 5.1 gives some more details about hospital admissions related to the main drugs of abuse.

- In accordance with the data from the addiction treatment services, the average age of the hospital patients was highest for the opiate patients and the lowest for the cannabis and the amphetamine patients.
- For the primary diagnoses as well as the secondary diagnoses, the average number of days for staying in the hospital was the highest for the cannabis patients, followed by the opiates, amphetamines, and cocaine patients. There is no explanation for these differences.

Cannabis	Cocaine	Opiates	Amphetamines
57	131	79	54
6.3	2.9	5.8	3.5
476	617	542	145
12.0	7.2	11.4	9.3
461	599	480	166
30 years	35 years	43 years	29 years
77%	73%	73%	73%
	Cannabis 57 6.3 476 12.0 461 30 years 77%	Cannabis Cocaine 57 131 6.3 2.9 476 617 12.0 7.2 461 599 30 years 35 years 77% 73%	Cannabis Cocaine Opiates 57 131 79 6.3 2.9 5.8 476 617 542 12.0 7.2 11.4 461 599 480 30 years 35 years 43 years 77% 73% 73%

Table 5.1:	Clinical admissions to general hospitals related to drug abuse and drug depen-
	dence in 2008*

* ICD-9 codes: cannabis 304.3, 305.2; cocaine 304.2, 305.6; opiates 304.0, 304.7, 305.5; amphetamines 304.4, 305.7. These ICD-9 codes are not 100% specific with regard to the drugs in question. Clinical admissions do not include one-day admissions. ** After correction for double counting: number of persons who were admitted at least once because of a drug-related disorder assigned as a primary or secondary diagnosis. Source: LMR, Prismant.

Conclusion

Diverse activities are realised to enhance the quality of treatment of drug dependent people. Examples are the long-term programme Scoring Results that recently celebrated its tenth birthday, effect studies resulting in new evidence, guidelines and protocols to support changes in daily treatment practice, and benchmarking projects and performance indicators that are meant to guide addiction treatment practices towards an improvement of outcomes for clients. A long term increasing trend in treatment demand related to cannabis in all age groups, may be explained by an increasing prevalence of problem use of cannabis, improvements in treatment availability and capacity (e.g. more cannabis specific treatments), an increasing number of referrals by GPs or youth care, and/or a greater awareness of the risks associated with cannabis use. Data suggest that the strong increase in cocaine related treatment demand has halted now, at least in specialised addiction care. However, recent trends may differ for crack users (decrease, possible in the wake of a decreasing population of opiate users who often also consume crack) and an increased number of cocaine powder users. Amphetamine use is still a minor reason for asking help, but treatment demand among the users of this drug continues to increase. There are signals of an increased popularity of amphetamine in some regions of the country, but quantitative data are lacking yet. Finally, there are indications for an increased treatment demand related to GHB dependence, though the numbers are still low. Prevalence data show low rates of GHB use in the general and regular school population, but higher rates in some subpopulations and settings (problem youth; nightlife scene).

6 Health correlates and consequences

6.1 Drug-related infectious diseases

The most important drug-related infectious diseases include HIV/ AIDS, and hepatitis B and C. They are transmissible through sexual contact (HIV, hepatitis B) and blood (hepatitis C, HIV and hepatitis B). Infectious diseases associated with poor living conditions (such as hepatitis A and tuberculosis) may also have higher incidence and prevalence rates among drug users. The overall conclusion of the data presented here is that the number of new diagnoses of HIV, and hepatitis B and C among injecting drug users is low. However, there are many indications that the number of chronically infected drug users, and thereby the burden of these diseases, is much higher, especially for hepatitis C. A general limitation of the registration data used for this overview is that patients are usually assigned to only one behavioural risk group. As it is possible to choose only one of several risk behaviours, injecting drug users may therefore be underestimated in these data.

ΗIV

For many years, the main source of information in the Netherlands on the prevalence of HIV and hepatitis B and C has been the (HIV) sentinel surveillance system among injecting drug users of the National Institute of Public Health and the Environment (RIVM). However, as regards drug users, this surveillance system has been discontinued in 2003. For the historical data collected as part of this surveillance system we refer to the National Reports in previous years. It is expected that in 2010 a new survey will be conducted, although the inclusion criteria will differ from previous surveys. Four sources of surveillance data remain, and are providing information on HIV infections among (injecting) drug users.

a. The national HIV/ AIDS registration of the HIV Monitoring Foundation (SHM) was appointed by the Dutch Ministry of Health Welfare and Sport as the executive organisation for the monitoring of HIV in the Netherlands in 2002. This registration contains data on HIV-infected patients who are seen regularly by HIV/ AIDS treating physicians in one of the 25 collaborative HIV treatment centres throughout the country. It also includes data from a prior project on HIV positive patients treated between 1998 and 2001 (the AIDS Therapy Evaluation Netherlands, or ATHENA, cohort). The longitudinal, anonymous data are used to monitor changes in the HIV epidemic, the natural history of HIV and the effects of treatment (www.hiv-monitoring.nl). One of the limitations of the SHM surveillance system is that most of the data do not represent recent HIV infections, and therefore the presented data may not correspond precisely to the actual situation.

In 2008, 851 new HIV diagnoses were reported in the treatment centres. In 2 cases (0.3%, both men) injecting drug use was the most likely route of transmission (table 6.1) (Koedijk, 2009).

- Up to December 2008 a cumulative total of 15,225 HIV-infected individuals were registered by the treatment centres and the HIV Monitoring Foundation (Koedijk 2009). The percentage of patients infected with HIV through injecting drug use is 4% (665 patients). A steady decrease of injecting drug use as the mode of transmission has been noticed from 9% before the year 2000 to 1% or less in recent years. In the majority (60%) of injecting drug users, HIV was diagnosed before 1996 (Gras, 2008). There is no doubt that sexual contact has been and still is by far the most important route of HIV transmission in the Netherlands. In the total database, 54% of patients have been identified belonging to the transmission risk group men having sex with men and 32% have acquired the virus through heterosexual contact (table 6.1). The annual number of new HIV diagnoses among men having sex with men is still increasing (Koedijk, 2009).
- 42% of all injecting drug users were diagnosed with HIV at an age between 30 and 39 years. In 37% of injecting drug users, the diagnosis was made before 30 years of age and the remainder was 40 years or older. Also in around 40% of men having sex with men and heterosexuals HIV is diagnosed between 30 and 39 years of age (Koedijk, 2009). Dutch patients were older at the time of diagnosis (39 years) than non-Dutch patients (34 years) (Gras, 2008).
- Of the registered HIV positive injecting drug users, 71% originate from the Netherlands and 22% from other Western European countries. This is in sharp contrast to HIV-positives infected through heterosexual contact, of whom half originate from Sub-Saharan Africa (table 6.1) (Koedijk, 2009).
- Of the patients diagnosed in or after 1996, almost 90% is treated in hospitals in the western part of the Netherlands (the "Randstad") or in the Southern part (Gras SHM 2008).

Transmission group	Number and per- centage of HIV cases diagnosed in 2008	Cumulative num- ber and percent- age of HIV cases	Gender: percent- age males (of cu- mulative number in transmission group)	Region of origin: percentage from the Netherlands (of cumulative num- ber)
MSM	577 68%	8,276 54%	100%	84%
Heterosexual contact	221 26%	4,904 32%	43%	34%
Injecting drug use	2 0.3%	665 4%	73%	72%
Blood (products)	4 0.5%	198 1%	64%	54%
Mother to child	2 0.2%	170 1%	54%	61%
Needle stick injury	1 0.1%	29 0.2%	79%	74%
Other/ unknown	44 5%	983 6%	83%	54%
Total	851 100%	15,225 100%	78%	64%

Table 6.1: Number and characteristics of recorded HIV infections by route of transmission

Figures are adjusted constantly because of reporting delays. Source: RIVM (Koedijk et al., 2009).

b. The 8 regional STI centres form the sexually transmitted infections (STI) sentinel surveillance. The network was implemented in January 2003 and collects a minimum set of epidemiological data to meet surveillance criteria. The web-based application SOAP facilitates the reporting of consultations (Koedijk, 2009).

- In 2008, 88,435 consultations were recorded. Of all STI-clinic visitors, 0.3% reported to have (ever) injected drugs: 163 consultations (50% males) involved drug users who ever (but not in the previous 6 months) injected, 79 (50% males) involved drug users who reported injecting drugs in the past 6 months. As this information is based on self-report, the data may be hampered by underreporting. It is also likely that the core group of drugs users may not visit an STI-clinic.
- In 2008, 393 individuals were newly diagnosed with HIV at the STI-centres; 1 of them (0.3%) reported to have ever injected drugs (Koedijk personal communication).

c. The prospective Amsterdam Cohort Studies (ACS) has been carried out since 1984 among homosexual men and since 1985 among drug users. Since 2000, only young drug users (aged <30 years) are allowed to enter the cohort (YODAM; see also § 4.3). Until December 2007, 1,666 (injecting) drug users have been included. Participants are followed up every 4 to 6 months, with standardized questionnaires on risk behaviour, and virological and immunological testing of blood samples (www.amsterdamcohortstudies.org). The total drug user cohort includes 1488 individuals, of whom 432 are in follow up, including 61 young drug users (data of January 2008).
- At study entry, 323 drug users were HIV-positive, and 96 seroconverted during consecutive visits, meaning that in 28% of participants HIV has been diagnosed at entry or during follow-up (www.amsterdamcohortstudies.org).
- In 2008, 335 ACS participants in the drug users cohort visited at least once the municipal health service. In this group, 15% ever (at entry or during follow-up) had a positive HIV-test result. Among the 55 young drug users who still participated in 2008, HIV was diagnosed in 5% (3 individuals) (www.amsterdamcohortstudies.org).
- HIV incidence rates among ever-injectors dropped from 8.6/ 100 person-years in 1986 to virtually 0 since 2000, with a slight increase to 0.85/ 100 person-years in 2005, when 2 HIV-cases were found (van den Berg et al. 2007). From 2006-2008, no new HIV infections were diagnosed in drugs users (injecting and non-injecting) (www.amsterdamcohortstudies.org).
- The decline in HIV incidence has been accompanied by a reduction in injecting drug use and needle sharing. Sexual risk behaviour continued, and the few new HIV seroconversions in the last couple of years are related mainly to unprotected heterosexual contacts (Lindenburg et al., 2006; Gras, 2008).

d. Regular screening of infectious diseases among drug users in treatment settings and collecting these data for surveillance practices is not yet common practice in the Netherlands. The Ministry of Health has assigned the RIVM the task to provide an overview of the infectious disease screening practice offered by addiction care institutions, including those municipal health services that actively provide these tests. The first overview focused on those institutions that have already some form of regular screening in place, including the Municipal Health Services (GGD) of Amsterdam and Rotterdam, as well as the addiction care in Heerlen. The data include both injectors and never-injectors. Note that the practice of infectious disease screening has been organized differently in these institutions, so that the figures are not comparable (Van Veen, 2009). See also Standard Table 09 (ST09) for the methodology that has been used by the Municipal Health Services (GGD) of Amsterdam and Rotterdam.

- In Amsterdam there are about 2,500 drug users on methadone treatment. About half of them receive methadone at the "methadone posts" or the "outer policlinics" of the municipal health service. These belong to the, on average, more problematic drug users. Between 2004 and 2008, there were 1,140 HIV tests performed in this group, of which 28 had a positive test result. Assuming that every patient has been tested only once, the HIV prevalence in this group is 2.5% (Van Veen, 2009).
- In Rotterdam the project "Active Testing" was piloted in 2007 and 2008. The project aims to
 offer and actively support the whole chain from counselling and testing to treatment completion for problematic drug users and homeless people (Breemer et al., 2009). In 2007, 1 of 36
 tested ever injectors was found positive for HIV (2.7%) and in 2008, 1 of the 59 tested ever
 injectors was HIV-positive. Both positives were recent injectors and had injected in the last
 six months (see also ST09).
- As part of this pilot project, a questionnaire has been distributed among 125 drug users in Rotterdam to study test behaviour (Breemer et al., 2009). The mean age of the drug users was 45 years and the majority were Dutch males. The results showed that 34% of the drug users never had an HIV-test. For three quarters who had been tested before, the most recent test was more than 6 months ago. The data indicate that HIV-testing practice is far from optimal and that HIV incidence and prevalence may be underestimated.

 In Heerlen drug users are offered (voluntary) testing of drug-related infectious diseases since 2003. Data are available on 197 drug users (injecting and non-injecting). Based on the (incomplete) database of test results the HIV prevalence was estimated at 9% (Van Veen, 2009).

AIDS

Until 2001, AIDS cases meeting WHO criteria were registered in the national Information System on AIDS Statistics, maintained by the Health Care Inspectorate (IGZ). In 2002 this AIDS registration was replaced by the HIV/ AIDS registration of the SHM mentioned above. As the IGZ data appeared to be incomplete since 2000, the data below are based on the IGZ registration until 1999 and the SHM data from 2000 onwards. The year of AIDS diagnosis refers to the date of the first CDC-C diagnosis (classification C according to the Centres for Disease Control).

- Up to December 2008, the cumulative total of reported AIDS diagnoses was 7,777 and 4,794 HIV infected individuals had died. The annual number of new AIDS diagnoses peaked in the early nineties (around 500 cases per year) and then dropped to around 250-300 cases per year (Koedijk et al., 2009). The observed decrease since 1996 is related to the availability of HAART, which slowed progression from HIV to AIDS.
- In 2008, 159 new AIDS diagnoses were made and 103 HIV patients died. Note that these numbers are subject to change due to reporting delay (Koedijk et al., 2009). Seven of the 159 (4%) new AIDS diagnoses were made in injecting drug users (table 6.2).
- Up until December 2008, 684 registered AIDS patients (9% of the total AIDS diagnoses) belonged to the transmission risk group of injecting drug users. The number of cases related to injecting drug use peaked in 1995 (74), but remained below 20 cases per year since 1999 (see table 6.2). The proportion of injecting drug users among the total population of AIDS patients is annually around 5% (Koedijk et al., 2009).
- Note that the contribution of injecting drug users in the total population of AIDS patients (9% over all years) is considerably higher than in the total population of HIV patients (4%). This indicates that the disease course in injecting drug users is less favourable than in other risk groups.

Transmission group	<=2002	2003	2004	2005	2006	2007	2008
MSM	3,980	118	112	145	114	118	74
	64%	40%	40%	43%	42%	46%	47%
Heterosexual contact	1,193	110	109	133	109	96	59
	19%	38%	39%	39%	40%	37%	37%
Injecting	615	15	8	18	11	10	7
drug use	10%	5%	3%	5%	4%	4%	4%
Blood	148	7	3	4	3	3	4
(products)	2%	2%	1%	1%	0.8%	1%	3%
Mother to child	51	6	3	2	0	0	0
	1%	2%	1%	0.6%	0%	0%	0%
Other/ unknown	11	36	44	35	37	30	15
	3%	12%	16%	10%	13%	12%	9%
Total	6,178	292	279	337	275	257	159

Table 6.2:Number and percentage of recorded AIDS patients, by year of diagnosis and by
route of transmission

AIDS cases were registered by the Health Inspectorate before 1999 and from 1999-2007 by the HIV Monitoring Foundation. Figures are adjusted constantly because of reporting delays. Source: RIVM (Koedijk et al., 2009).

Hepatitis B and C: notification data

Notification data are reported by the municipal health services to the National Institute of Public Health and the Environment (RIVM). It is of note that estimating the incidence of hepatitis B and C based on notification data of acute cases will give an underestimation, as a large percentage of new infections remain asymptomatic. However, they may (in the long run) give indications of trends on the incidence of these infectious diseases.

Since 1976 acute hepatitis B infections have to be notified to the Health Care Inspectorate (IGZ). In April 1999, newly diagnosed chronic and subclinical HBV infections also became notifiable diseases. The data show that, since years, injecting drug use plays a marginal role in newly diagnosed acute and chronic hepatitis B infections.

- In 2008, 265 acute cases of hepatitis B infection were notified (see also table 9 part 4). Based on these notification data, the incidence of acute hepatitis B infections in the Netherlands is 1.3 per 100,000 inhabitants (Koedijk et al., 2009). In the 165 cases with known route of infection, unprotected sexual contact was found to be still the most important risk factor. There were no notifications of acute hepatitis B in injecting drug users in 2008.
- Chronic infections with hepatitis B were reported in 1,576 cases in 2008. In 3 of the 1,108 chronic infections with known route of infection injecting drug use was regarded as the vector.

Hepatitis C is a notifiable disease since April 1999. Until October 2003 both chronic and recent HCV infections had to be reported to the Health Care Inspectorate within 24 hours after the diagnosis (positive test for HCV or HCV-RNA-PCR, with or without clinical symptoms). Since October 2003, this procedure only applies to (suspected) acute or recent infections. As acute infec-

tions are often asymptomatic, an unknown rate of missed diagnosing and underreporting is possible. There is a recent decline in notified cases of acute hepatitis C among injecting drug users.

 In 2008, 48 cases of acute hepatitis C infection were notified. The transmission route of 39 of these 48 cases was reported; only in 1 case injecting drug use was the likely route of transmission (see ST09). As in 2007, unprotected sexual contact was the most important route of acute hepatitis C transmission, and in over 90% this sexual transmission was in men having sex with men (Koedijk et al., 2009).

Hepatitis B and C: treatment data and other sources

Screening of drug users in treatment on infectious diseases is no routine procedure and data are only available for a few treatment centres.

In the database of the national HIV/ AIDS registration of the HIV Monitoring Foundation (SHM), in total 9,716 HIV-infected patients, aged 18 years or over and on combination antiretroviral therapy (cART), were tested for both HBV and HCV (Gras et al., 2008).

- A striking outcome was that more than three quarters of the injecting drug users were coinfected with hepatitis C or B, while over 90% of men having sex with men as well as the heterosexuals were "only" mono-infected with HIV (table 6.3).
- Although the injecting drug users made up only 5% of the total of HIV-positives, they harboured more than 50% (348 of 653) of the HCV infections. Put differently: 71% of the injecting drug users were co-infected with HCV (table 6.3).
- Also a co-infection with both HBV and HCV was more prevalent among HIV-positive injecting drug users than among other HIV-positive risk groups (table 6.3)(Gras et al., 2008).
- The analyses showed that HIV-HCV co-infected patients had an increased risk of dying. This
 may be explained by an increased risk for liver-related death as well as by an immune deficiency caused by HIV. There was no increased mortality risk for HIV-HBV co-infected patients (Gras et al., 2008).

	Injecting drug users	Men having sex with men	Heterosexuals
HIV+ only	23%	92%	93%
HIV+ HBV+	2%	6%	5%
HIV+ HCV+	71%	2%	3%
HIV+ HBV+ HCV+	5%	0%	0%
Total number	492	5134	3274

Table 6.3	Percentages of HIV positive patients with hepatitis B or C co-infection in three
	behavioural risk groups

Source: HIV Monitoring Foundation (Gras et al., 2008).

Since 2003, the Municipal Health Service (GGD) of Amsterdam collects information on hepatitis C virus antibodies in methadone clients participating in low threshold services.

 In 2008, HCV antibodies were detected in 31 of 48 (65%) tested current injecting drug users. Prevalence of HCV antibodies was found in older aged injecting drug users with a longer history of injection (see also <u>ST09</u>). In Rotterdam, as part of the project Active Testing, in total 213 drug users and homeless people were tested on hepatitis C in 2007 and 2008 (Breemer et al., 2009).

- The hepatitis C prevalence in 191 drug users (injecting and non-injecting) was 33%.
- In the 103 drug users who reported ever-injecting, hepatitis C prevalence was found in 82%.
- Eight persons (14%) of the 56 who were tested HCV-positive and for whom sufficient information was available, stated that they had never injected. This might indicate transmission through non-injecting equipment, or underreporting of injecting.
- Of all 76 participants who tested positive for an active hepatitis C infection, 95% ever used hard drugs.
- In 60% of the 76 patients with an active hepatitis C infection, the genotype of the virus was unfavourable, either 1 or 4, which requires a longer treatment duration.

The open and ongoing Amsterdam Cohort Studies (ACS) among drug users (see above) focuses among others on hepatitis C. The study generates a wealth of information, which is also mentioned in the previous National Reports. In this reporting period, several for DRID relevant PhD projects were successfully finished (Van de Laar, 2008; Van Houdt, 2009; Van de Berg, 2009).

- The prevalence of HCV in the injecting drug users in this cohort is 83,5% (Van den Berg et al., 2007).
- The prevalence of HCV in the non-injectors has recently been studied. HCV antibodies were longitudinally tested in 352 participants of the ACS who reported that they had never injected drugs before study entry (Van den Berg et al., 2009). They were predominantly (70%) male, of Dutch nationality (87%, although one third of these were of Surinam ethnicity) and almost half of them preferred cocaine as their main type of drug. The prevalence of HCV antibodies at study entry was 6.3%. The prevalence of HIV antibodies in these never-injectors was 4.0%. When studying the genotypic characteristics of the hepatitis C viruses (phylogenetic analysis), close links were found with the hepatitis C viruses that are present in injecting drug users, while a specific cluster for non-injectors was not observed. These findings suggest, but do not confirm, that there was an underreporting of injecting in the never-injecting drug users.
- During follow-up (2,005 person years of never injecting) one participant seroconverted, resulting in a HCV incidence of 0.49/1000 person years. This finding indicates that the risk of sexual or household transmission is low. The observed HCV incidence is much lower than the incidence estimated from the observed prevalence (0.79/100 person years). Further, 47 never-injecting drug users started injecting during follow-up. Seven of them were already HCV positive at study entry and 23 of the remaining 40 seroconverted for HCV after starting to inject. These data all suggest that some injecting drug users may have been misclassified as never-injectors (Van den Berg et al., 2009).
- In the drug users cohort of the ACS the rate of spontaneous viral clearance of the hepatitis C virus was assessed (Van den Berg, 2009). The study included 55 prospective HCV seroconverters and 51 recent HCV-positives who started injecting less than two years before entry in the ACS. The virus genotype was determined in 60 subjects (26 type 1; 6 type 2; 23 type 3; 5 type 4). In 35 (33%) of these 106 recently with hepatitis C infected drug users, the virus was no longer found in two consecutive tests. The strongest predictor of this spontaneous clearance was female sex (OR 3.13; 95% CI 1.35-7.25). The data suggested that HIV co-

infection may hamper the spontaneous HCV clearance. There were no hepatitis C virological or sociodemographic factors found to be associated.

In 59 seroconverters for HCV, the rate of reinfection, superinfection and combinations were studied (Van de Laar et al., 2009). The study comprised 25 seroconverters with spontaneous HCV clearance, of whom 10 had multiple infections (11 reinfections, i.e. infections after the spontaneous clearance of a previous HCV infection, and 3 superinfections, i.e. new infections with a different hepatitis C virus strain while the previous infection is still present). The remaining 34 seroconverters did not clear the virus; in 14 of them multiple HCV infections were found (20 superinfections and 1 coinfection, i.e. almost simultaneous infection with another hepatitis C virus strain). These data show that multiple HCV infections are common (in this population 41%) in injecting drug users and argue against protective immunity for HCV.

The Netherlands is a low hepatitis B endemic country (estimated HBsAG prevalence 0.3-0.5%) with higher prevalence in specific risk groups (Marschall et al., 2008). Studies among drug users on the incidence and prevalence of hepatitis B infection are scarce.

- In the drug users' cohort of the Amsterdam Cohort Studies changes in incidence, risk factors and circulating genotypes were determined in the period 1985-2002 (Van Houdt et al., 2009). The study included 1,268 drug users, both injecting and non-injecting. At study entry, 671 participants had already been infected with hepatitis B (anti-HBc positive), 62% of the (ever) injectors and 26% of the never-injectors.
- Of the remaining 597 not-HBV infected participants, 83 seroconverted (for anti-HBc) during follow-up. The incidence of HBV infection was stable around 5.9/100 person years until 1993, and then declined to 0/100 person years in 2002. The cumulative incidence after 13 years of follow-up was 34% among injectors and 8% among never-injecting drug users.
- Genetic analyses of the hepatitis B viruses found in the seroconverters (injectors as well as never-injectors) revealed that they were all closely connected to the same strain. With the extinction of reported acute hepatitis B infections in drug users in Amsterdam since 2000, this specific hepatitis B virus strain has also disappeared (Van Houdt et al., 2009).
- It is likely that a decline in risky injecting behaviour is responsible for the observed decline in hepatitis B incidence.

In the Netherlands, there is no universal vaccination, but a risk group vaccination policy. Medical professionals, children with at least one migrant parent from a high endemic region, chronically ill people such as haemophiliacs, and children with Down syndrome living in an institution are offered vaccination. In addition, a national vaccination program was started in 2002 targeting at behavioural risk groups: men having sex with men, commercial sex workers, hard drug users and heterosexuals with multiple sex partners.

• From November 2002 until the end of September 2009, 15,625 drug users (including current, ever and never injectors) received a first vaccination. During this visit, a blood sample was taken to screen for a previous hepatitis B infection. Chronic carriership was found in almost 1% of drug users and immunity (implying a previous infection, which has been cured) was found in less than 11% of the drug using participants. The data presented are preliminary and subject to change, since the campaign is ongoing (data are provided by Marlies van Dam, National Institute for Public Health and the Environment).

In the framework of the evaluation of the hepatitis B vaccination campaign in all risk groups, the vaccination coverage and its effect on HBV transmission have been calculated (Van Houdt et al., 2009a, 2009b). Based on the number of individuals who completed the vaccination series, the observed numbers of chronically infected individuals and the estimated size of the target population, it was concluded that the campaign only reached around 12% of its target population (table 6.4). It is of note that the vaccination coverage in the drug users outstands the coverage in the other risk groups. The study overall concludes that the coverage of the vaccination campaign is too low to have a sufficient impact on HBV incidence in the risk groups. The introduction of universal vaccination against HBV is reconsidered in the Netherlands.

	Estimated total popula- tion	Fully vacci- nated	Estimated % anti-HBc positive	Vaccination coverage (range)	Susceptibles (%)
Drug users	24,000- 46,000	6,723	15-53%	39% (17-60%)	4,600-32,000 (19-70%)
Men having sex with men	278,000- 392,000	13,208	13-36%	6% (4-7%)	165,000- 328,000 (59-84%)
Commercial sex workers	20,000- 25,000	4,010	14-33%	25% (19-30%)	9,400-17,000 (47-68%)
Heterosexuals	195,000	23,763	5-42%	17% (13-21%)	89,000-161,000 (46-83%)
Total	517,000- 658,000	47,704	11-40%	12% (8-15%)	262,000- 538,000 (51-82%)

Table 6.4National hepatitis B vaccination campaign including the pilot: estimated hepatitisB vaccination coverage and number of susceptibles in behavioural risk groups

Derived from Van Houdt et al (Van Houdt et al., 2009a, 2009b). Data include the pilot phase and refer to the period October 1998 until November 2007.

6.2 Other drug-related morbidity

In this paragraph data will be presented on drug-related emergencies and requests for information on drug intoxications at the National Poisons Information Center. Moreover, research data on the health risks associated with ecstasy use will be summarised.

Drug-related emergencies

There is no national registration system yet for drug-related emergencies in the Netherlands, but a pilot study to develop such a system turned out to be successful (see § 7.1). Current sources giving partial information on emergencies include the registration of hospital admissions (LMR, see chapter 4) or cases reported by the Central Post for Ambulance Transports in Amsterdam (see below). In addition, the injury information system (Letsel Informatie Systeem, LIS) of the Consumer Safety Institute gives information on the number of people treated annually at the emergency departments of hospitals. These data are derived from a representative selection of hospitals and are extrapolated to yield national estimates. Because of the estimation method and associated error margin data are averaged over five years. For GHB cases, a separate trend analysis has been conducted.

According to the LIS, it is estimated that 3,500 people are treated annually at a hospital emergency department following an accident, violent incident or self-mutilation related to drug use (cp. 15,000 on account of alcohol).

- Forty-three percent are aged between 20 and 29 years and 73% are male.
- The proportion of drug-related emergencies requiring hospitalisation is relatively high (36%; cf. 18% for traffic accidents or 11% for private accidents).
- Poisoning is the most frequent cause of emergency (74%); 12% of all cases is due to complications of body-packing.
- Cocaine is the most frequently cited drug (32%); cannabis is involved in 17% of the cases with a known substance. Lower ratios are found for ecstasy (10%), heroin (4%), and hallucinogenic mushrooms (4%). Note, however that it was not possible to specify a drug in 36% of the cases, however, a later analysis suggests that the majority of them concerned GHB intoxications (see below).
- These figures are likely to be an underestimate of the true number of emergencies related to drugs due to underreporting.

GHB

Due to signals of an increasing (problem) use of GHB (and signals of a normalisation of 'going out ' among users), the Consumer Safety Institute carried out a special analysis of GHB emergencies at hospitals (Stolte, 2009).

- There was on estimate a fourfold increase in GHB emergencies since 2003, reaching a level of 980 in 2008. This equals about 19 victims per week.
- In one-third of the cases alcohol use was also involved and 20% had also used another drug.

- In 40% of the cases hospitalisation was required; half of these cases were directly sent to intensive care.
- Some 65% of the emergencies occurred during weekend days

Drug-related non-fatal emergencies in Amsterdam

The Amsterdam Municipal Health Service keeps a record of non-fatal emergencies brought to its attention (Central Post for Ambulance Transports). The more serious emergencies require transportation to the hospital by ambulance. The link with drug use has been based on case history and circumstantial data; there is no toxicological confirmation. Table 6.5 gives the annual number of emergencies per drug from 2000 to 2008.

- The total number of drug-related requests for emergency assistance remained at the same level between 2006 and 2008 (just over 1,000).
- Most drug-related emergencies are related to the use of cannabis (37%), followed by heroin/cocaine (21%). LSD and amphetamine related emergencies are relatively rare.
- The proportion of cases requiring transportation to a hospital (a proxy measure for the seriousness of the emergency) were 39% for cannabis, 52% for hallucinogenic mushrooms, 66% for opiates/cocaine, 50% for amphetamine, 70% for ecstasy and 80% for GHB. This latter substance is difficult to dose because of the small safety margin, which may results in loss of consciousness. This risk is increased with concomitant use of alcohol.
- The increases in cannabis-related emergences between 2005 and 2006 have not continued in 2007 and 2008. The number of ecstasy emergencies (4% in 2008) remained at about the same level in the past years.
- The number of GHB emergencies has increased over the years, and the data for the first half of 2009 (80 cases) suggests that this trend continues. These data are consistent with the signals for an increased popularity of this drug in some populations.
- The increasing trend for hallucinogenic mushrooms is probably related to the growing number of (fun) tourists visiting Amsterdam. Following several serious health emergencies involving the use of hallucinogenic mushrooms (and often other substances), the Ministers of Health and Justice decided that (fresh) hallucinogenic mushrooms had to be brought under the control of the Opium Act, which was effectuated on December 1, 2008⁶ (see also § 1.1). Since then it is forbidden to sell these mushrooms in smart shops. The number of emergencies recorded in the first half of 2009 (18, not in table) suggests that exposure to hallucinogenic mushrooms has been reduced, at least in Amsterdam.

⁶ Dried or other preparations of hallucinogenic mushrooms are already legislated for under the Opium Act.

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Opiates/cocaine	188	208	216	226	239	230	234	220	221
Cannabis	141	289	285	257	320	342	461	444	381
Hal. mushrooms	24	49	50	60	55	70	125	149	125
Ecstasy	36	42	39	39	59	63	53	67	43
Amphetamine	30	6	5	7	9	3	13	17	14
LSD	2	3	1	1	7	1	1	4	4
GHB	25	69	67	74	98	76	110	110	128
Unknown/other	20	37	38	29	54	89	46	54	115
Total	466	703	701	693	841	874	1043	1065	1031

Table 6.5:Number of non-fatal emergencies due to hard drugs and recreational drugs recorded by the Amsterdam Municipal Health Service

Source: Amsterdam Municipal Health Service.

Information requests on acute intoxications

Another source of information on trends in emergencies is the number of information requests (by telephone) from physicians, health authorities and others on acute intoxications recorded by the National Poisons Information Centre (NVIC) of the RIVM. Note, however, that these data are just indicative and do not reliably represent the actual number of acute intoxications. Since 2008 the numbers include also information requests that were sent through the internet.

- Table 6.6 shows that the total number of information requests related to drugs sharply increased between 2000 and 2005 but dropped in 2006 and remained at the same level in 2007 and 2008. A possible explanation for the reduction is that physicians have become more familiar with recognising and treating problems related to these drugs, especially if they have been on the market for some time, which reduces the need to consult the NVIC for information.
- In 2008, most information requests were related to cocaine and GHB, followed by ecstasy and cannabis, and at some distance opiates, ephedra and hallucinogenic mushrooms. Apart from a slight increase in 2008 for opiates and amphetamines, the numbers did not deviate much from those in 2007.

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Ecstasy	164	194	184	208	246	217	183	171	185
Amphetamines*	42	39	39	47	51	128	106	94	125
Cocaine	150	184	217	247	227	254	211	231	255
Cannabis	71	129	141	144	191	202	186	178	168
GHB	91	174	194	212	190	241	203	202	218
Opiates**	51	42	95	112	112	129	32	47	74
Ephedra	16	28	61	110	127	67	55	26	28
Hall.mushrooms	34	58	49	65	52	62	67	68	62
Other (smart shop) products	37	56	43	65	89	83	103	103	97
Total drugs	656	904	1,023	1,210	1,285	1,383	1,146	1,120	1,212

Table 6.6: Information requests related to drugs at the National Poisons Information Centre

*Including also methamphetamine (6 times in 2007). ** Due to a change in registration: since 2006 methadone is not counted in the group of illicit drugs but in the group of medicines. Source: NVIC, RIVM (Van Velzen et al., 2007).

Ecstasy: effects on cognition and interactions with alcohol/cannabis

In 2009 two theses on the neuropsychological effects of ecstasy use were published (Schilt, 2009; Dumont, 2009). One thesis covered research in the framework of the Netherlands XTC Toxicity (NeXTC) study (see also previous National reports). The main results of this work suggest that ecstasy use has a specific (negative) effect on verbal memory, which was manifest in both heavy and low frequent users and among both poly drug users and users with minimal experience with other drugs. For example, in one study a sample of incident ecstasy users, who had consumed on average 3.2 ecstasy tablets (median 1.5) and were tested on average 12 weeks (±12 weeks) after their last use, performed worse on a verbal memory task compared to a control group (Schilt et al., 2007). Moreover, as there is usually no strong relationship between the degree of exposure to ecstasy and degree of cognitive impairment, it has been investigated whether individual differences in genetic vulnerability to the effects of ecstasy might play a role. The results showed that Met-allelle carriers of the COMT gene (which is involved in metabolising ecstasy) were somewhat more sensitive to the effects of ecstasy on verbal learning than the homozygous Val-subjects. However, after correction for the use of other drugs, this association was no longer significant, which means that although the COMT-gene may have a moderating role, other drug use is also important in causing the negative memory effects (Schilt et al., 2009).

The other thesis focused on the interaction between the acute effects of ecstasy and alcohol/THC on neuropsychological and physiological measures (Dumont, 2009). The results generally showed that MDMA 100 mg, alcohol (2-3 glasses or 0.6 ‰) and THC (in recreational doses) all had moderately negative effects on cognition. Moreover, the combined effects of MDMA/alcohol or MDMA/THC did not exacerbate single drug effects as far as cognitive functioning is concerned. Further, MDMA improves psychomotor speed (but not accuracy) and increased subjective arousal, while alcohol impaired all psychomotor measures and induced sedation. Co-administration of MDMA and alcohol improved psychomotor speed, impaired accuracy and reversed alcohol induced sedation. Physiologic (side) effects of MDMA (such as fluid retention, increasing body temperature) were attenuated to some extent by alcohol. THC coadministration did not potentiate physiologic effects of MDMA, but both drugs had a potent (additive) effect on heart rate, which might be harmful for sensitive subjects. Moreover, MDMA's stimulant effects were not sufficient to overcome the THC induced performance impairment. However, THC seemed to enhance the subjective (positive) drug effects of MDMA, which may be a reason for the widespread use of this drug combination. The entactogenic effects of MDMAare likely to be mediated by the neuropeptide oxytocin.

6.3 Drug-related deaths and mortality among drug users

General Mortality Register: direct deaths

In the Netherlands, statistics on drug-related deaths are available from the General Mortality Register (GMR), or Causes of Death Statistics, held by Statistics Netherlands (CBS) (Van Laar et al., 2006). In this register the causes of death are classified according to the International Classification of Diseases, Injuries and Causes of Death (ICD). The 9th edition of the ICD was used from 1979 through 1995, and the 10th edition of the ICD has been in use since 1996. The register has national coverage, but in standard form only includes deceased residents of the Netherlands who were registered at a municipal register. However, data on drug-related deaths among non-residents are available from an additional database.

The General Mortality Register (GMR) specifically provides data on acute mortality due to drug use, that is poisoning by drugs, or drug 'overdose'. These are the cases in which death is directly related to drugs. The GMR data do not make a distinction between experimental and habitual drug users, and are not suitable for tracing deaths due to rare toxicological substances like various synthetic drugs. Nonetheless, the registered cases can be selected according to the EMCDDA definition of acute drug-related death as reported in the Standard Tables <u>ST5 2009 NL 01</u> and <u>ST6 2009 NL 01</u>.

Overall trend

Figure 6.1 shows the number of cases recorded from 1987 through 2008 according to the EMCDDA selection of ICD-codes. The figure only includes cases from residents that were registered at a municipal register. Among non-residents, an additional 21 cases were registered in 2008 in a separate database (De Bruin, Statistics Netherlands (CBS), personal communication, 21-07-2009). The total number of recorded drug-related deaths among residents increased between 1995 and 2001; and thereafter showed a whimsical trend. The total number decreased in 2002 and 2003, rose in 2004, declined until 2007, and finally rose again between 2007 and 2008. The rising trend until 2001 can be attributed to various factors, such as the change from ICD-9 to ICD-10 in 1996, since ICD-10 includes more cases. It can also be attributed to the rise in acute cocaine deaths, which appears to parallel an increase in the problem use of this sub-stance.

Of the 129 cases in 2008, a total of 48 cases were coded to unspecified substances, compared to 42 cases in the 2007 registration year. Although the specific substances are not known, a previous inquiry at Statistics Netherlands (CBS) revealed that these cases are mostly related to hard drugs and to polydrugs, and are therefore rightly included in the group of drug-related deaths. From 1996 up to including 2008, the number of unspecified cases ranges from 18 in 1996 to 53 in 2004.

Despite fluctuations over the years, the total number of drug-related deaths in the Netherlands has remained relatively low. This might be explained by prevention measures and protective factors, such as the nationwide availability of methadone-maintenance treatment and the low rate of injecting drug use in the Netherlands. There are, however, some indications that not all cases of drug-related deaths are recognised in the GMR (De Zwart et al., 2001), although the level of underreporting will probably be rather low.

Opiates and cocaine

Cases of "opiates" and "cocaine" refer to cases in which these substances were explicitly stated as the primary cause of death on the death certificate. Between 1985 and 2001, opiate intoxications were the most common causes of drug-related death recorded among Dutch residents. In this period, the casualty rate fluctuated between 47 and 77 cases. In 2002, the number of opiate deaths decreased and reached about the same level as the number of acute cocaine deaths, which had slowly increased since the late nineties. In 2003 and 2004 these converging trends diverged again, between 2005 and 2007 they were merging again, but they diverged again between 2007 and 2008 due to an increase in opiates deaths.

Psychostimulants

In 2008, there were only two cases that were coded to poisoning by psychostimulants, compared to only one case in 2007. Whether these fatal intoxications concerned amphetamines, MDMA, or other psychostimulants is not known.

GHB

With regard to GHB-related mortality, it should be noticed first that it is difficult to assess this kind of mortality due to the fact that GHB is naturally present in the human body. Moreover, GHB is a substance which metabolizes quickly, and therefore there are only short periods of time to trace GHB in body fluids like blood and urine. Unfortunately, there is no specific ICD-code to register GHB-deaths in the Causes of Death Statistics. Nonetheless, some information about GHB-related mortality is available for the Netherlands.

- Although GHB cannot be coded yet into an ICD-code, GHB in 2008 was notified four times on the original death certificates. It is not clear, however, whether GHB in these four cases was a direct or an indirect cause of death.
- In Amsterdam, from 2006 until the middle of 2009, a total of five mortalities were noticed in which intoxication with GHB was the suspected cause of death. In three cases, GHB was applied as a means to commit suicide.
- Currently, the Netherlands Forensic Institute (NFI) is conducting research on the cases of GHB-related mortality that have been reported to the NFI.

Figure 6.1: Number of acute drug-related deaths in the Netherlands according to the EMCDDA selection of ICD-9 codes (1987-1995) and ICD-10 codes (1996-2008)*



*Only residents that were registered at a municipal register in the Netherlands are included. Among nonresidents, an additional 21 cases of acute drug-related deaths were registered in 2008. ICD-9 from 1987 through 1995: 292, 304.0, 304.2-9, 305.2-3, 305.5-7, 305.9, E850.0, E850.8, E854.1-2, E855.2, and E858.8, E950.0, E950.4, E980.0, E980.4 (selected in combination with N965.0, N968.5, N969.6 or N969.7). ICD-10 from 1996 onwards: F11-F12, F14, F16, F19; and X42, X41, X62, X61, Y12, Y11 (selected in combination with T40.0-9 or T43.6). Source: Causes of Death Statistics, Statistics Netherlands (CBS). The break in lines between 1995 and 1996 indicates the switch from ICD-9 to ICD-10 coding.

Age and gender

The population of problem hard drug users is ageing, and this trend is reflected in the increasing age of drug users that have died from drugs. Figure 6.2 shows that the percentage of victims aged 35 years and above increased from 22% in the late eighties to 66% at the beginning of this century.

Between 1986 and 2008, the percentage of female cases varied from 10 to 28% per year, without showing a clear trend.

Figure 6.2: Trends in age distribution of cases of acute drug-related deaths in the Netherlands, according to the EMCDDA definition



Source: Causes of Death Statistics, Statistics Netherlands (CBS).

Mortality among drug users in Amsterdam

In paragraph 6.2 below, results will be reported from the ongoing Amsterdam Cohort Studies (ACS) among drug users. With regard to mortality among drug users, it will be reported there that HIV accelerates the HCV disease progression (Smit et al., 2008). As a consequence of this, HIV accelerates mortality due to HCV.

Each year the Municipal Health Service Amsterdam (GGD Amsterdam) traces drug-related deaths by combining data from the Central Methadone Register, the municipal registrar's office, the municipal coroners, hospital records, and the police. Data on fatal poisonings ('overdoses') from the Amsterdam coroners also include tourists and drug users that stay illegally in the Netherlands and are therefore not included in the Population Registry. The General Mortality Register (GMR), on the contrary, only includes residents of the Netherlands who are recorded in the Population Registry. Moreover, in addition to direct deaths (or 'overdoses'), the Amsterdam registration also includes mortality cases that are indirectly related to drugs. Figure 6.3 gives the number of deaths that were found according to this procedure among the drug users in Amsterdam.



Figure 6.3: Number of deaths among drug users in Amsterdam

* Other causes include basic mortality, infectious diseases, violent deaths, accidents and suicide. Cases are counted among all drug users who have (ever) been registered in the Central Methadone Register of the Amsterdam Municipal Health Service. This may result in an overestimation of the number of cases in the category 'other causes'.

Each year more deaths were due to "causes other than overdose". In 2005 the number of deaths temporarily increased, but in general there is a downward trend since 2003.

Apart from the absolute number of deaths per year, the Municipal Health Service Amsterdam also monitors the *mortality rates* per observed person years. In order to conduct a proper followup of drug users, only methadone patients who are likely to stay in Amsterdam are included in this monitoring system. Moreover, only those methadone patients are included who have a known address in the city and were born in the Netherlands, Surinam, the Netherlands Antilles, Turkey, or Morocco.

Figure 6.4 gives the mortality per 1,000 person years of observation for the four-year periods from 1985-1988 to 2001-2004, and the three-year period 2005-2007. A steady increase in the baseline mortality is seen, which is related to the ageing of the population of opiate users. More-over, while the overdose mortality showed a declining trend, a steady increase was seen in mortality due to other causes until 2001-2004, which might be indirectly related to the ageing of the population (more somatic and psychiatric comorbidity). The standardised mortality ratios further decreased from 6.4 in 2006 to 4.7 in 2007. Probably, the majority of injecting drug users who are at highest risk of dying have died already and current risk ratios tend to decrease to the level among non-injecting drug users.

Figure 6.4: Mortality per 1,000 person years among Amsterdam methadone patients from 1985-1988 to 2005-2007



The baseline mortality indicates the mortality among the Amsterdam population of the same age as the methadone patients. Source: Municipal Health Service Amsterdam.

Direct and indirect deaths for the whole of the Netherlands

<u>No New Information Available</u>. There is no new information available with regard to the total number of deaths. The total number includes the deaths that are directly as well as indirectly related to drugs. As reported already in the previous national report (Van Laar et al. 2009), it is estimated that in 2001 there was a total of 479 deaths of which 11% were considered to be the base-rate mortality not related to drugs, 23% were attributed directly to drugs (poisoning, overdose), and 66% were attributed indirectly to drugs (Cruts et al., 2008). Given the fact that a decreased mortality rate has been found in Amsterdam in 2006, the mortality rate may have started to drop throughout the Netherlands.

7 Responses to health correlates and consequences

The broad lines of drug policy at the national level aimed to limit the health consequences of drug use are put into practice by many local or regional initiatives.

7.1 Prevention of drug-related emergencies and drug-related deaths

Drug-related emergencies

In 2008, a monitor of "drug-related acute health incidents" was developed, which was piloted in the first half of 2009. The monitor aims to identify, on an actual basis, trends in drug-related health incidents (via a basic registration), and simultaneously intends to pick up acute life-threatening situations (via case reports). The findings will be used as direct input for preventive measures, both directed at drug users and health care workers, as well as to policy makers. During the pilot phase, data on health incidents associated with drug-intoxication or trauma while under the influence of a drug were collected by ambulances, first-aid departments of hospitals in the centre of a city, forensic doctors and general practitioners in 4 sentinel regions. Also two large providers of medical care at parties, not regionally bound, collaborated. The data were weekly or monthly (depending on the local possibilities) uploaded in a central web-based database and analysed. The pilot phase was used to test whether it was organisationally possible to run the monitor. Since this question was positively answered the monitor is currently being extended and will include eight to nine regions at the end of 2010.

Apart from this monitor, there are on all levels many measures in place to prevent drug-related emergencies, e.g., relating to large-scale parties. They have been mentioned in previous reports. Those measures that have been initiated by the Dutch government in the past 30 years have also recently been extensively described in the evaluation report on the Dutch drug policy (mainly chapter 7 of the report) (Van Laar and Van Ooyen-Houben, 2009).

Drug-related deaths

<u>NNIA.</u> Within the framework of its harm reduction policy, the Netherlands has consolidated the prevailing practices to prevent drug-related deaths. There is no specific new information available in addition to the prevention measures that have been reported already in the previous national reports.

7.2 Prevention and treatment of drug-related infectious diseases

Needle/syringe exchange

Estimates from Mainline (a grassroots organisation for drug users in Amsterdam) and the Trimbos Institute indicate that there are approximately 150 needle/syringe exchange programs in the Netherlands. This is a rough estimate because for some cities it has been reported that "some" pharmacists are also exchanging syringes. In total it may be that 20 to 30 pharmacists in the Netherlands are doing this.

In Amsterdam and Rotterdam the numbers of syringes that were exchanged are reported. In Amsterdam, after a steady increase until 1993 (1,082,880 syringes were exchanged in that year), a gradual decline started and this continued until 2007 to a reported number of 171,200 syringes. In 2008 there was a small increase to 184,800 (source: GGD Amsterdam). In Rotterdam, the number of syringes that was ordered by the local distribution centres was reduced between 2000 and 2007 from 422,000 to 168,900. In 2008 however, the number of ordered syringes increased with 75,000 (source: GGD Rotterdam). The decline during many years can be explained by the reduction of injecting heroine users in general, a reduction of drug users from neighbouring countries, often injectors, a reduced popularity of injecting resulting from experienced health problems and in combination with an increase in the use of crack, and the mortality among injectors. The interpretation of the increase in 2008 is not yet clear. Possibly the present group of injectors injects more frequently, or re-uses their syringes less often. Maybe there is an (unexpected) increase in the number of injectors. Another possibility is that the personnel in the needle and syringe exchange programs, or the drug users themselves, have stored bigger amounts of syringes.

Drug consumption rooms

<u>NNIA</u>. Around 40 drug consumption rooms are operating in the Netherlands. Though these are also present in smaller cities, most of these harm reduction facilities are concentrated in bigger cities. Besides, not all rooms have injecting rooms, mainly because there are no injecting drug users (anymore) who use these rooms.

National hepatitis B vaccination campaign

Since 2002, free vaccination of behavioural risk groups (drug users, men having sex with men, heterosexuals with multiple sex partners, including commercial sex workers) is taking place nationwide. Due to the low vaccination coverage in the risk groups that have been achieved since 2002, the debate on universal vaccination is renewed (see also 6.3). Irrespective of the outcome of this discussion, targeted risk group vaccination will have to be continued for many years. With regard to drug users in the Netherlands, the crucial question is whether they will remain included as a risk group or not.

Other prevention activities

For the Ministry of Health (VWS), the prevention and combat of infectious disease among drug users is one of its priorities. Therefore, the Ministry finances the program Infectious Diseases and Drug Use, a collaborative project of the grassroots organization Mainline Foundation and the National Support Function Prevention in Mental health and addiction care (Dutch abbreviation: LSP) of the Trimbos Institute. The focus of the program is on education and implementation of harm reduction measures. The program is in close contact with the functionaries at the addiction care institutions whose task is dedicated to infectious diseases. These functionaries, usually nurses, assemble every two months in a network to exchange information. In 2007 and 2008, the risk behaviour and health among marginalised crack and heroin users was studied in two projects, especially with regard to infectious diseases (Hoogenboezem, 2007; Hoogenboezem 2008). The results of these studies have been used as input for the development, testing or implementation of new activities, e.g., 'Pep Talk' (for drug using sex workers), 'Always safe' (infor-

mation on the effects of the combination methadone and alcohol), and 'Take it' (a magazine for sero-positive drug users). For drug users a brochure entitled Lust for Life (information on hepatitis C) and the CD-roms ('Hepatitis C: rate your state' and 'Hepatitis C, what to do with it' in Dutch: 'Hepatitis C wat moet je ermee'). Further, with regard to hepatitis C, a guideline has been developed describing the whole chain from recruitment for counselling and testing to treatment and treatment completion. The guideline gives suggestions for many of the practical issues (such as predisposing conditions like housing, insurance, social stability) that often with-hold drug users from hepatitis C treatment. In 2009, among others, a depression prevention module will be developed for hepatitis C positive drug users.

Also in 2009, the program focused its research and attention on several new target groups with risky drug use behaviours, among others men having sex with men, Eastern Europeans and youths. Targeted at prevention workers, a booklet was published regarding the effect that several drugs may pose on libido and sexual behaviour in young people. Also drug using prostitutes are currently at increased risk of health damaging behaviour, as many of the 'walk the streets' zones have been closed and prostitutes are being driven away. The attention for the above mentioned new target groups will be extended in 2010 (Baas et al., 2009).

In September 2009, a national hepatitis C information campaign has been launched targeted at the general population and at risk individuals, among others drug users. The campaign aims to raise the awareness on hepatitis C in order to enhance testing behaviour. The part of the campaign that is targeted at drug users will be evaluated. In this evaluation the effects of the campaign on knowledge of the drug users, testing and treatment behaviour and motives underlying these aspects will be assessed.

Treatment activities

In December 2007, the new practice guideline Viral Hepatitis and other liver diseases (second revision) was published by the Dutch College of General Practitioners (Van Geldrop et al., 2007). The guideline focuses on chronic hepatitis B and C, as these are increasingly prevalent these days and treatment possibilities have substantially improved. Also the Dutch College of Gastroenterologists has launched two guidelines, on the treatment of hepatitis B and C respectively (Nederlands Genootschap van Maag-Darm-Leverartsen, 2008). These guidelines do not pay special attention to the obstacles encountered in the treatment of drug users. In daily practice, the addiction care institutions have an important role in finding solutions for these obstacles. As mentioned in the previous National Reports, in some addiction care institutions the drug user in treatment for hepatitis C is chaperoned and supervised by addiction care personnel (e.g., in Heerlen, in Arnhem). Only two official projects are running to guide drug users through the whole labyrinth of hepatitis C treatment, being the DUTCH-C treatment study (part of the Amsterdam Cohort Studies) and the project Active testing in Rotterdam.

The Ministry of Health has further facilitated the treatment of infectious diseases by providing the addiction care institutions with extra financial means for the implementation of the RIOB, a medical guideline on opiate substitution treatment. The guideline gives special attention to testing and treatment of drug-related infectious diseases. It has not yet been determined whether this financial injection has any positive effect on the advocated strategy of regular testing and treatment.

7.3 Responses to other health correlates among drug users

Psychiatric co-morbidity

After the publication of data showing high prevalence rates of co-morbidity between substance use and other mental disorders (Bijl et al. 1997;Knapen et al. 2007b), attention for this topic has increased in addiction care and mental health care. More or less simultaneously the plea for integrated treatment for dual diagnosis patients started (see former National Reports). Although knowledge about effective treatment options is growing, scientific evidence in this field still shows large gaps (Posthuma et al., 2003; Van der Stel, 2004; Van der Stel, 2005). This may be caused partly by the large number of combinations of addiction (severity of drug dependence and the kind of drugs used) and types of mental disorders (ADHD, schizophrenia, etc.) and partly by unknown interaction effects of psychoactive substances and prescription drugs. A recent study on the prevalence of psychiatric disorders among methadone patients and selfreported quality of life showed that psychiatric comorbidity considerably reduces quality of life (Carpentier et al., 2009). During the past years the number of dual diagnosis treatment units is growing in the Netherlands (National Report 2006)(Van Rooijen et al. 2007)(De Jonge et al. 2008).

An American evidence-based toolkit for Integrated Dual Diagnosis Treatment was translated and implemented in five Dutch outpatient treatment teams. A first evaluation showed that more than one year after the implementation several problems concerning treatment fidelity of IDDT at baseline had decreased (but not disappeared) (Van Wamel et al., 2009). Some targets concerning treatment integrity and the organisation of integrated treatment were fairly sufficiently reached (e.g. introducing longer-term care, adding outreach activities for increasing coverage, using multidisciplinary teams, supplying family support, introducing a quality policy), others not (e.g. self help, group treatment, outcome monitoring and individual treatment planning). The authors concluded that though some organisations have added treatment techniques for dual diagnosis patients, few organisations consistently work with well-known evidence-based interventions e.g. motivational enhancement techniques, behavioural interventions, skills training or reinforcement strategies.

According to a recent report of the National Health Inspectorate, in most Dutch organisations of mental health care, patients with schizophrenia are supported and treated in accordance with the multidisciplinary Guideline for Schizophrenia. However, the Inspectorate reported several inconvenient conclusions on treatment of problems with substance use among this group. Half of all (33) organisations have not yet developed a policy on substance use in the organisation. Another 50 percent does not have a formal policy to enhance safety for the patients and to combat drug use and drug related nuisance (drug dealing) in and around the organization. Forty-five percent of the organization (15) has a protocol for dealing with wishes and needs of the patient and only three organizations dealt somehow with wishes and needs of the patient's family (Inspectie voor de Gezondheidszorg, 2009).

Finally, a national congress on integrated care for dual diagnosis patients was organized in March 2009 for professionals working in this field. During the congress a new expertise centre was started. This centre is a collaborative initiative of four big regional mental health care organizations and the Trimbos Institute (LEDD, 2009).

Drug use by mental health care clients is often significant (see former national report). Most organizations for mental health care and addiction care do not have a safety policy towards problems with drugs and alcohol within and around the organization. Sponsored by the Dutch Health Research and Development Council (ZonMw), nine organizations collaborated in the development of a toolkit. This toolkit explains how to develop a basic view on tackling drug problems, how to enter into engagements and to make explicit agreements on this subject. The content of this toolkit will be improved during a second feedback round (Huijbregts, 2009).

Mentally retarded people

Patient safety is also considered important for organizations working with young people with mental retardation (*licht verstandelijk gehandicapten*). This group is extra vulnerable for (the consequences of) drug use and several newsletters reported about drug dealing and drug use in and around the sites for mental health care where these young people are living. The Ministry of Health, Welfare and Sports prioritized the development of expertise to fight this phenomenon. One school for higher vocational education (Windesheim) developed a training course for professionals working with this target group, to improve their knowledge about drugs and skills to cope with addiction (T.K. 24077-227, 2009). The Trimbos Institute is involved in the development of a standardized intervention program with prevention and treatment component to combat substance use among this target group.

One organization already has a specific treatment program for people with mental retardation and drug dependence (Van Eeden, 2009). This program offers more structure and sets targets that fit the mental capacities of this patient group. Recently, it was noted that organizations for people with mental retardation and addiction care are increasingly working together to solve substance use problems in this target group, although funding of these initiatives remains a problem.

8 Social correlates and consequences

8.1 Social exclusion

General trends in the Netherlands

In the Netherlands, the Social and Cultural Planning Office of the Netherlands (SCP) monitors the general trend in social cohesion, social exclusion, and poverty. In 2008, the SCP devoted its annual social and cultural report to the issue of social cohesion (Schnabel et al. 2008). Attachment to one's country and being proud of it are indicators for social cohesion. In a study in 2003 among 34 countries, the International Social Survey programme (ISSP) found that the Dutch scored rather low on both indicators and were only surpassed by the Germans. Apparently, patriotism is not a main foundation for social cohesion in the Netherlands. On the other hand, the Dutch do show much trust in others and in institutions, which is another source for social cohesion.

In the past decade, social safety in general increased in the Netherlands, but remained a problem in certain unfavourable neighbourhoods. In the largest cities, primary and secondary education is strongly segregated along ethnic lines. But the more ethnic minorities come in contact with native Dutch, the more they feel Dutch themselves. All in all, within the European Union, the level of social exclusion in the Netherlands is far below average. Nonetheless, salient groups that remain socially excluded are the single-parent families, the disabled, people with bad health, ethnic minorities, the unemployed, and people with a low income. However, the trends for these groups at risk seem to be favourable.

Drug use among socially excluded groups

There is a clear link between social exclusion and the use of drugs. The previous national reports already reported on indicators of social exclusion among drug users (<u>NNIA</u>). Conversely, higher prevalence rates of drug use are commonly found among socially excluded groups like (ethnic) neighbourhood youth, homeless adolescents, young hard-drug users, female as well as male prostitutes, young people that hang around, problem youngsters, and the homeless in general. New qualitative data are available from the Amsterdam Antenne monitor and Tendens monitor in Gelderland.

Amsterdam

Part of the "Antenne" monitor in Amsterdam is qualitative research targeted at substance use among neighbourhood and problem youth (Benschop et al. 2009). With regard to drug use among socially excluded groups, the Antenne signaled the following in the observation year 2008:

- "Many neighbourhood youth smoke *cannabis* to be sociable and to relax, but also out of sheer boredom."
- "For many homeless youth, being stoned" from *cannabis* "is one way to get through the day."

- "Neighbourhood youth still show little enthusiasm for *cocaine* or *ecstasy. Cocaine* in particular has a negative image among the problem youth."
- Other drugs like *amphetamine*, *methamphetamine*, *GHB*, *ketamine*, *laughing gas*, *psychedelics*, *viagra*, and, *poppers* are also <u>not</u> popular among the neighbourhood and problem youth.

Gelderland

For the province of Gelderland, the institute for addiction care "IrisZorg" each year monitors the use of alcohol and drugs and gambling among young people. This monitor is called the "Tendens" (De Jong et al. 2008). With regard to drug use among socially excluded groups the Tendens monitor signaled the following in 2008:

- Among problem youth and youngsters that hang around, *cannabis* is the substance that is used most often and is valued the most. The main reason for them to use cannabis is to relax. Frequent users of cannabis run the risk to drop out from school and work.
- Youngsters that hang around are also found to use *ecstasy*, which serves as the first hard drug to experiment with. Ecstasy is seen as a kind of "soft hard drug".
- *Amphetamines* are used most in networks of problem youth and youngsters when going out to parties. There are indications that amphetamines are becoming more popular.
- Some football hooligans are found to use *powder cocaine* as a means to become more firm and determined when confronting hooligans from another football club.
- In networks of problem youth the use of *crack cocaine* has been signaled more often.
- The use of *GHB* has been signaled for the first time in networks of problem youth and youngsters that hang around. In some networks, GHB is used on a daily basis, probably to cope with problems.
- *Ketamine*, *LSD*, and *heroin* are used less often by the problem youth, but the interest for heroin seems to be growing.

8.2 Social reintegration

Many chronic drug users also have other problems, for instance problems due to causing public nuisance or conducting criminal behaviour, financial problems, or having no housing or work. Although the vulnerable group with multiple problems also includes people who do not use drugs, a considerable overlap exists with the group of problem drug users.

In February 2006, the national government and the municipalities of the four largest cities signed and funded a "Strategy Plan for Social Relief" for the group with complex and persistent problems (Plan van Aanpak Maatschappelijke Opvang). In the Netherlands, the four largest cities are called the "G4", that is the "Great 4", consisting of Amsterdam, Rotterdam, The Hague, and Utrecht. As a result of the strategy plan, instruments were published concerning individual action plans, facilities for long stay were realised, and activities were initiated to reduce the expulsion of target group members from housing units. These instruments were primarily meant for directing local supportive activities for this target group. The goals of the plan are to improve the living conditions of this vulnerable target group, and reduce public nuisance and criminality. The main objective for 2010 is to offer 10,000 target group members an integrated individual care program that may include day activities or work, social care, addiction care, housing, and financial help. The budget for this plan has been estimated at \in 175 million for 2009. By way of a 'return on investment', it has been calculated that each euro spent on this program will save around \in 2,20 that otherwise would have been necessary (for police, justice and assurances) if this help would have been absent (G4, 2007).

Programs advertised in annual reports

As a reflection of the social relief strategy, institutes for addiction care can be found to advertise in their annual social reports special programs that aim at the social reintegration of drug users. Table 8.1 reviews these programs. All care institutions in the Netherlands are legally obliged to prepare a social report each year, on behalf of the Admittance of Care Institutions Act (in Dutch: Wet Toelating Zorginstellingen, WTZi). In case an institute for addiction care does not pay special attention to a certain rehabilitation program in its annual social report, this does not mean that the institute has no such program at all. An institute does mention a program in its social annual report in case it has made special efforts to set up or to expand such a program.

main regular mot	
Institute, year annual report	Program for social reintegration
JellinekMentrum, 2007	 Assertive Community Treatment Extra team for clients with addiction and psychosis Extra team for rehabilitation Individual Rehabilitation Method (IRB) Supervised living Appointment of ex-addicts as Expert By Experience
Bouman GGZ, 2007	• Supervised living for chronic addicts, start of a new hostel
Parnassia Groep, including Brij- der Verslavingszorg, 2007	 Social recovery by supervised living Multi Dimensional Family Treatment (MDFT) Triple-Ex (Schooling and work)
Centrum Maliebaan, 2008	 Project "Parachute" for realizing a new social position Municipal reintegration projects Schooling projects
Verslavingszorg Noord Neder- land, 2007	 Supervised living, preparation of extra facilities Assertive Community Treatment and case management Specific projects like the street prostitution project Monitoring system for relapse management
Tactus Verslavingszorg, 2007	 Extension of small-scale supervised living and hostels Social recovery targeting at self-reliance and support of social environment
IrisZorg, 2008	 Community Reinforcement Approach (CRA) as the general approach behind all forms of care and treatment Social relief and supervised living Rehabilitation courses by activation, education, and work projects
Emergis, 2008	 Social relief Employment of Experts By Experience Rehabilitation policy
De Hoop, 2007	 Special Foundation for Reintegration Special Limited for Job Creation Education and work projects
Novadic-Kentron, 2008	 Social approach towards addiction Supervised living Community Reinforcement Approach (CRA) Multi Dimensional Family Treatment (MDFT)
GGZ-groep Noord- en Midden- Limburg, 2007	 Supervised living in combination with outpatient care Activation projects and work rehabilitation Social addiction care including interferential care
Mondriaan Zorggroep, 2008	 Intensive community care within the framework of the Function Assertive Community Treatment (FACT) Recovery by expertise by experience
Source: http://www.jaarverslagenzorg	nl.

Table 8.1:	Programs for social reintegration advertised in the annual social reports of the
	main regular institutes for addiction care in the Netherlands

From the twelve main institutes in table 8.1, six institutes mention to have given special attention to forms of Assertive Community Treatment (ACT), Community Reinforcement Approach (CRA), or support of the social environment. Supervised living is mentioned by seven institutes. Parnas-

sia's supervised living in the form of an elderly home for 'retired addicts', called "Woodstock", received some attention in the media (Volkskrant, 30-03-2009). "Experts By Experience" (in Dutch: ervaringsdeskundigen) are former addicts who have been trained as care givers in such a way that they can apply their lived experiences as former addicts when giving help to current addicts. Appointing Experts By Experience can be seen as a form of two-sided social rehabilitation. On the one hand it promotes the rehabilitation of the former addict and on the other hand it serves to promote the rehabilitation of the still addicted client. Putting in Experts By Experience, or expertise by experience, is mentioned explicitly by three institutes. Some experts by experience have united themselves in The Black Hole Foundation (Stichting het Zwarte Gat, www.hetzwartegat.info). Other reintegration projects set up by the institutes for addiction care target at daily activities, schooling, or work, and are mentioned by five institutes.

Evaluation research

"Centrum Maliebaan" is the regular institute for addiction care that is located in Utrecht, the fourth city of the Netherlands. In its annual report Centrum Maliebaan has mentioned, among others, the municipal reintegration project. The city of Utrecht is evaluating all the municipal social reintegration projects that were started in 2007 and 2008 (Brouwer et al., 2009). In these two years a total of about 5,000 clients have started a reintegration program, some of whom belonged to "target group 5", the group to receive "activation for clients with multiple problems", including psychiatric problems and/or addiction. Preliminary figures indicate that, from the 52 psychiatry/addiction clients that finished their program in 2008, 86% had reached the goal of the program, of whom 15% by means of a paid job, 21% by means of volunteer work, and 50% by social activation.

As mentioned above, the social reintegration of homeless addicts in the four largest cities of the Netherlands is embedded within the Strategy Plan for Social Relief. This Plan targets all homeless people, whether or not they have an addiction problem. The results of the Plan are monitored by the Strategy Plan for Social Relief Monitor, which is part of the National Monitor on Homelessness (MMO). Recently, the Strategy Plan for Social Relief Monitor has evaluated the results of the Plan by the end of 2008 (Maas et al., 2009). In 2007, substantial improvements were already noticeable with regard to the number of people living on the street. A reduction in public nuisance was also noticed. These favourable results were consolidated in 2008. Local networks of care were set up, cooperation between the different actors was intensified and extra after care activities were set up. Long stay facilities were developed for drug addicts who do not respond adequately to quasi-compulsory treatment. In 2008 the implementation of the strategy plan was initiated in 39 municipalities. These activities have not been systematically evaluated yet.

Starting in 2006, intakes and individual trajectories were drawn up by the end of 2008 for 2,772 homeless in Amsterdam, 2,409 homeless in Rotterdam, 827 homeless in The Hague, and 429 homeless in Utrecht. In all municipalities, a total of 6,437 clients were included in the program. An individual reintegration trajectory was considered successful in case a "stable mix" had been reached. Criteria for a stable mix were stable housing, income, and being in contact with treatment for at least three months.

By the end of 2008 there were 1,644 stable mixes in Amsterdam, 971 in Rotterdam, 403 in The Hague, and 292 stable mixes in Utrecht. Compared to the total number of intakes and individual trajectories, this amounts to 59% stable mixes in Amsterdam, 40% stable mixes in Rotterdam, 49% stable mixes in The Hague, and 68% stable mixes in Utrecht. The results are summarized in table 8.2. From the total of 6,437 intakes in the four main cities, a total of 3,310 stable mixes had been achieved by the end of 2008, amounting to an achievement of 51%.

Table 8.2:Number of intakes among homeless people, achieved stable mixes, and percen-
tage of stable mixes from the number of intakes by the end of 2008 in the four
largest cities of the Netherlands, G4

City of the G4	Intakes	Stable mixes*	%
Amsterdam	2,772	1,644	59%
Rotterdam	2,409	971	40%
The Hague	827	403	49%
Utrecht	429	292	68%
Total	6,437	3,310	51%

*A stable mix requires stable housing, income, and being in contact with treatment for at least three months. Source: Strategy Plan for Social Relief Monitor, National Monitor on Homelessness (MMO), (Maas et al., 2009).

Notwithstanding the successes that have been achieved this far by the Strategy Plan for Social Relief, the Federation for Social Relief has given some comments on the plan (G4 maatschappelijke opvang van de Federatie Opvang, 2009):

- The plan has been set up in too short a period in too much a technocratic top-down way.
- The plan still misses the essence of what it means for homeless people to have gone through the process of social exclusion and does not take into account their right to speak.
- The plan misses a conceptual framework about the factors that will determine whether the goals will be reached to reduce homelessness and to reduce public nuisance. It has not been proven yet that public nuisance will decrease automatically as soon as homelessness has been reduced.
- A thorough problem analysis about the different routes along which people become homeless is missing in the plan.

9 Drug related crime, prevention of drug related crime and prison

9.1 Drug related crime

9.1.1 Drug law offences

Drug law offences consist mainly of offences against the Opium Act, in which trafficking, production and cultivation, dealing and possession of drugs are defined as criminal acts. Drug use is not a criminal offence and possession of small amounts for own use is not prosecuted. These 'small amounts' are specified in prosecution protocols: not over five grams or five plants of cannabis and not over one tablet/ample/ball or 0,5 grams of any hard drug (Stc 2000/250; Stc 2004/246). The Opium Act distinguishes between soft drugs (mainly cannabis) and hard drugs (like heroin, cocaine, ecstasy, amphetamines).

In this paragraph databases are used from the Public Prosecutor, which are analysed at the Research and Documentation Centre (WODC) of the Ministry of Justice, and of the National Police Forces. It should be noted that figures from registrations, that are reported here, always depend for a certain part on the activities and priorities of law enforcement agencies as well as completeness of the registrations. Also, databases are often adapted and improved in the course of time. Later versions may differ from former ones. We have to deal with 'living systems'. Figures and trends should therefore be interpreted carefully. We present the current updates.

The following political and judicial framework is relevant for the interpretation of the data for 2008:

- In December 2007, the Minister of Justice launched a programme called 'Strengthening of approaches against organized crime' (T.K.29911/10). The approaches contain a combination of administrative and preventive measures, criminal justice and repressive approaches and international co-operation. There is a close link with activities against money laundering and other financial-economic crime.
- Trafficking and dealing of heroin, cocaine and synthetic drugs and the organised large scale cultivation of cannabis forms one of the priority areas of the fight against organised crime for the period 2008-2012 (Boerman et al., 2008).
- In addition, the intensification of law enforcement on cannabis cultivation, which was launched in April 2004, is still running. An integrated approach with administrative and criminal law approaches is applied, in which public and private partners co-operate.
- In November 2007, an amendment to the Opium Act was proposed, which enables local authorities to close premises where drugs are sold. This is a new instrument for administrative coercion (Stb. 2007/392). The closing of a premise will be the ultimate sanction in a chain of administrative sanctions (T.K.30515/3).
- In December 2008, hallucinogenic mushrooms (dried and fresh ones) were brought under the Opium Act. They are defined as soft drug, which means that they have the same judicial status as cannabis.

Criminal investigations into organised drug related crime (table 9.1)

Figures on investigations into organised crime come from the Information Services of the National Police Forces. They make an annual inventory for Europol, in the framework of European Organised Crime Threat Assessment ('OCTA'). The majority of these investigations are drugrelated, mostly hard drug-related.

- In 2008, 352 investigations into more serious forms of organized crime were surveyed, of which 70% involve trafficking or production of drugs. This is 2% less than in 2007. The majority concerns cases with hard drugs: in 76% there is some hard drug involved and in 35% it is only hard drugs. In 65% there is some soft drug (mainly cannabis) involved and in 24% it only concerns soft drugs/cannabis.
- The proportion of cases with hard drugs decreased compared to 2007 from 83% to 76%, that of cases with soft drugs decreased from 67% to 65%.
- The proportion of cases with only one category of hard drugs stayed more or less stable (from 36% in 2007 to 35% in 2008). Compared to 2006 there is a declining trend, which implies that there are more cases with more than one category of hard drugs.
- The proportion of cases with only one category of soft drugs increased: 20% in 2007, 24% in 2008. This could possibly be cases of criminal cooperatives that cultivate or export cannabis, but no other drug.
- The proportion of cases with a mix of hard and soft drugs decreased from 47% in 2007 to 41% in 2008.
- When hard drugs are involved, the drug is mostly cocaine (76%). The proportion of cocaine did not change much between 2007 and 2008.
- In 46% of the cases with hard drugs, it concerns synthetic drugs. This proportion increased (from 40 to 46%).
- In 22% of the hard drug cases it concerns heroin; this proportion increased somewhat between 2007 and 2008, but it is still lower than it was in 2006.

Table 9.1:	Investigations into more serious forms of organised crime, percentage of drug
	cases and type of drug involved, 2001-2008 ¹

	2001	2002	(II)	2003	2004	(III)	2005	(IV)	2006	2007	2008
Total number of investigations:	100%	100%		100%	100%		100%		100%	100%	100%
Ν	146	185		221	289		176		333	328	352
- Targeting drugs	62%	63%		66%	69%		72%		75%	72%	70%
Investigations targeti	ng drug	s by harc	l- an	d soft dr	ugs:						
Ν	90	117		146	200		127		250	235	247
- cases with hard drugs	83%	83%		83%	84%		85%		79%	83%	76%
- cases with soft drugs	41%	45%		39%	27%		41%		60%	67%	65%
 only one category of hard drugs 	59%	55%		61%	69%		59%		40%	36%	35%
- only one category of soft drugs	17%	17%		17%	11%		15%		21%	20%	24%
- hard- and soft drugs	24%	28%		22%	16%		26%		39%	47%	41%
Investigations targeting hard drugs by type of drugs:											
Ν	75	97		121	168		108		198	194	188
- Cocaine				60%	57%		54%		68%	77%	76%
- Synthetic drugs				54%	39%		44%		43%	40%	46%
- Heroin				17%	18%		29%		29%	20%	22%

I. Investigations may involve trafficking or production of several drug types, therefore the numbers in the table categories cannot be added up. II. Since 2002 a new format is used; data from 2002 are not fully comparable to later data. III. Data from 2005 concern only the period January-November. IV. In 2006 a larger scope of selection was implemented; as a consequence the number of investigations is substantially higher than in the years before; in particular the number of soft drugs trafficking investigations is concerned; therefore the 2006 data can not be compared to the data of the years before. Source: KLPD-DNRI, 2009.

Police arrests for drug law offences

There are no national police figures of 2008 available. Over 2007, figures are definitive now. These will be presented here. In general, the picture of Opium Act arrests is quite stable in the last years. Hard drug arrests form the majority.

• In 2007 there were about 21,000 arrestees for Opium Act offences. This number increased until 2004 and stabilised since them on a relatively high level, with a small decrease between 2006 and 2007.

- In most of the cases the arrest concerns an offence with a hard drug: 10,709 times, this is about half of the Opium Act arrests. This number did not change much between 2006 and 2007.
- In 7,870 cases it concerns an arrest for a soft drug/cannabis offence (37%). This number is stable since 2005.
- There are 2,804 arrests for cases in which both hard and soft drug cases are involved. There is a continuous increase in this kind of arrests, also in 2007.
- Most arrestees for Opium Act offences are male. Most of the arrestees have more than one criminal antecedent. For 40%, the 2007 offence is the first registered offence.

Drug law offences handled by the Public Prosecutor (table 9.2)

The next phase in the criminal justice chain is the Public Prosecutor. Looking at trends in the period 2001-2008, it is clear that there is a decreasing trend in the number of cases in the last years, which is in line with a general trend in recorded offences in the Netherlands. The majority of drug law offences recorded concern production, trafficking or dealing of drugs. Most drug law offences are brought to court, but an increasing fraction is handled by the Prosecutor himself by a (financial) transaction.

- The Public Prosecutor handled 18,785 Opium Act cases in 2008, which is a decrease compared to 2007. There is a slightly decreasing trend since 2005.
- The decrease in 2008 holds true for hard drug as well as for soft drug cases.
- The percentage of Opium Act cases of all cases is 7% in 2008. This fraction did not change much in the last years, which means that trends in Opium Act offences follow general trends in offences in the Netherlands.
- The percentage of hard and soft drug cases is almost equal in 2008 (48%). Three percent concerns a combination of hard and soft drugs.
- The percentage of hard drug cases shows a declining trend in the longer term, whereas the percentage of soft drug cases is rising over the years.
- In cases where hard drugs are involved, it concerns in 51% of the cases the possession of hard drugs. It is not known from the figures how much of a drug was involved in these cases. The general guideline for prosecution tells that, if possession concerns small amounts, which are considered as meant for own use, police arrest and prosecution can be abandoned – although the drug will be seized. But if someone possesses more of a drug than the small amount that is considered 'for own use', or if there is also another, more serious offence involved, arrest and prosecution can follow.
- 49% of the cases recorded by the Public Prosecutor concerns production, trafficking or dealing. In cases of soft drugs, 73% concerns production or trafficking and 27% concerns possession (of small amounts, or in combination with a more serious offence).
- In general, for all kinds of drugs, most cases (60%) concern production, trafficking or dealing of drugs.

Table 9.2:	Opium Act cases recorded	by Public Prosecutor I	by drug type.	2001-2008 ^{I,II}
		······································	· · · · · · · · · · · · · · · · · · ·	

	2001	01 2002 2003		2004 2005		2006 2007		2008
	2001	2002	2005	2004	2005	2000	2007	2000
Hard drugs	7,894	9,502	10,307	11,972	9,922	9,907	9,471	9,086
Soft drugs	5,521	6,613	7,283	9,248	9,497	9,542	9,188	8,977
Hard and soft	459	455	612	695	716	822	677	651
Other/unknown	70	47	31	32	60	35	56	71
Total	13,944	16,617	18,233	21,947	20,195	20,306	19,392	18,785
Hard drugs	57%	57%	57%	55%	49%	49%	49%	48%
Soft drugs	40%	40%	40%	42%	47%	47%	47%	48%
Hard and soft	3%	3%	3%	3%	4%	4%	3%	3%
Other/unknown	1%	0%	0%	0%	0%	0%	0%	0%
Total ^{III}	100%	100%	100%	100%	100%	100%	100%	100%

I. More than one case may be recorded per suspect and cases may have been 'filtered' at the level of the police (only cases with a reasonable chance of being prosecuted will be sent to the public prosecutor). II. Figures are cleaned and adapted every year. The table contains adapted figures, which might be different from figures reported before. III. Due to rounding off percentages do not always add up to 100%. Source: OMDATA, WODC.

Decisions made by Public Prosecutor in Opium Act cases (table 9.3)

- The Prosecutor brings most of the Opium Act cases to court in 2008: 63%. This fraction is lower than in 2007.
- 24% of the cases end with a transaction imposed by the Public Prosecutor in 2008. This fraction is rising over the years. In 2007, it was applied almost 1,000 times. The median amount of money in financial transactions of the Public Prosecutor fluctuates between 220 and 270 euros; 2007 is no exception (250 euros).
- 6% of the cases are dismissed for policy reasons. In 2004, this fraction was high because many cases were dismissed as a policy in cases of hard drug trafficking at Schiphol Airport by drug couriers. Non-prosecution was a policy decision and part of the temporary drug oriented approach of drug couriers at Schiphol. Since 2007, all of these types of cases are prosecuted again.
- 6% of the cases are dismissed for technical reasons. This percentage does not change much.
- The other cases ended with joinder of charges, were dismissed for administrative reasons or transferred to another court.
- The percentage of hard drug cases submitted to court is 67%. The percentage of soft drugs cases submitted to court is 57% and the percentage of combined cases that is submitted to court is 83% (not in table).
- Opium Act cases make up 7% of the total number of cases dealt with by the Public Prosecutor in 2007. There is no difference compared to 2007.

Table 9.3: Decisions by the Public Prosecution in Opium Act cases (2001-2008)

	2001	2002	2003	2004	2005	2006	2007	2008
Submitted to court	71%	70%	72%	61%	65%	66%	66%	63%
Transaction	15%	19%	18%	20%	19%	21%	21%	24%
Case dismissal for policy reasons	4%	3%	3%	10%	8%	6%	5%	6%
Case dismissal for techni- cal reasons	7%	5%	5%	7%	6%	5%	5%	6%

Source: OMDATA , WODC.

Court sentences and sanctions for Opium Act offences (table 9.4)

In 2008, the court handled 11,487 cases with an Opium Act offence. There is a decrease since 2006, a trend like the one at the Public Prosecutor. Most of the court cases concern hard drugs (51%), 45% concerns soft drugs and 4% hard and soft drugs combined. The general decrease affects all kinds of Opium Act cases.

The percentage of Opium Act cases of the total number of cases handled by the court, however, did not change, it stayed 8%, which means that the declining trend in Opium Act cases follows a general trend in criminal court cases in the Netherlands. The court applies community service orders, prison sentences and fines – in this order of ranking.

	2001	2002	2003	2004	2005	2006	2007	2008
Opium Act total	8,840	10,703	12,714	12,143	12,199	13,023	11,845	11,487
Hard drugs	5,540	7,055	8,315	7,006	6,362	6,527	6,033	5,835
Soft drugs	2,975	3,289	3,996	4,662	5,306	5,902	5,322	5,210
Hard and soft	315	334	398	466	524	575	483	436
Kind of drug unknown	10	25	5	9	7	19	7	6

Table 9.4: Number of court sentences for Opium Act cases, hard and soft drugs, 2001-2008¹

I. There can be more than one case per person. Source: OMDATA, WODC.

Specific data on the kind of sanctions are available until 2007 (not in table). There are no reliable 2008 data available yet.

- Thecourt cases for Opium Act offences usually result in a conviction with a community service order, an unconditional prison sentence or a fine.
- The sanction most often applied in Opium Act offences in 2007 is the community service order. There is a decrease compared to 2006. This means that there came an end to a continuously rising trend over the last years.
- The mean number of days of community service orders is 106 days in 2007, about a week less than in 2006 and also less than in the years before 2006.
- There were 4,165 (partly) unconditional prison sentences in 2007. This sanction shows a clear decreasing trend since 2003.
- The mean number of days of (partly) unconditional prison sentences is 340 in 2007, which is a bit longer than in 2006 (311 days).
- The median amount of money of fines is 400 euros in 2007, which are less than in the years before.
- Opium Act cases form 8% of the total number of cases handled by the courts in 2007. This fraction did not change very much since 2002 (between 8% and 9%).

Custodial sentences for Opium Act offenders (figure 9.1)

Of the 11,934 persons who are detained in Dutch prisons on September 30, 2008, 20% was there because of an Opium Act offence. There are more detainees for violent offences. Opium Act offences are second in proportion.

Figure 9.1: Percentage of detainees for Opium Act offences, compared to five other catego ries of offences, September 30, 2008



Source: Kalidien and Eggen, 2009.

New developments in Opium Act offences

The Advisory Committee for Drug Policy (Adviescommissie Drugsbeleid, 2009), which was installed in order to design an outline for a new general strategy for the drug policy in the future, signals a growing influence and involvement of criminal cooperatives in the drug markets in the Netherlands, with public nuisance, risks of corruption and infiltration in the formal economy as a societal consequence. The drug business is not a specialised business; it is interwoven with other types of crime.

There is no 'magic bullet' with regards to drug crime, according to the Committee. A dynamic combination of prevention, treatment, regulation and law enforcement should be used, in a mix which is fine-tuned to the specific situation around certain drugs on a specific moment. This viewpoint is adopted by the ministers of Justice, Health, of Interior Affairs and of Youth and Family Also, as mentioned before, the classification system used in the Opium Act will be reviewed (Hoofdlijnenbrief drugsbeleid, 2009).

Conclusion

The figures in this paragraph showed that most of the more serious forms of organised crime that is subject of police investigations are drug-related. The fraction of cases with soft drugs/cannabis is increasing, the fraction of cases with hard drugs is decreasing, although it still is the majority. The figures also showed that the number of Opium Act offences in the criminal justice chain – police, Public Prosecutor, Courts – is stable or decreasing. This is in line with a general trend in criminal justice cases in the Netherlands. A considerable proportion of Dutch detainees is convicted for a drug law offence.

9.1.2 Other drug-related crime (i.e. crimes committed by drug users)

Offences by drug users (table 9.5)

The Police Records System includes a classification 'drug user'. It is important to note that in the Netherlands drug use as such is not illegal. The designation 'drug user' is accorded by the Police to a suspect only if he/she may constitute a danger to others due to his or her drug use, if he/she indicates being a drug user or if he/she asks for methadone. The classification is made by the police, but because drug use is not assessed systematically, its validity is disputable. A considerable proportion of the drug using offenders seems to be missing in the classification. The category of drug users who is arrested by the Police has the following profile in 2007 (not in table):

- 92% is male.
- The group of registered drug users is a greying population. The mean age increases from 35 years in 2001 to 38,8 years in 2007. In 2007 94% was over 24 years old.
- Most of them (44%) live in one of the four largest cities (250,000 or more inhabitants).
- Many of them are repeat offenders: 77% was arrested more than ten times before and 22% more than 50 times.
- Most of them committed property crimes without violence (table 9.5). This fraction decreased in the period 2001-2007.
- The percentage of drug users suspected of property crimes with violence also shows a slowly decreasing trend over the years.
- The percentage of drug users suspected from other violence (against persons), however, increases.
- And so does the percentage of drug users suspected of vandalism and traffic offences.

	2001	2002	2003	2004	2005	2006	2007
Property crimes without violence	63%	63%	58%	56%	53%	50%	49%
Property crimes with violence	11%	12%	11%	10%	8%	8%	8%
Other violence (against persons)	20%	22%	23%	24%	25%	26%	29%
Opium Act offence	18%	19%	22%	22%	24%	25%	21%
Vandalism, disturbance of public order	21%	23%	23%	23%	22%	23%	24%
Traffic offence	10%	10%	10%	11%	11%	11%	12%
Sexual offence	1%	1%	1%	1%	1%	1%	1%
Other	10%	10%	11%	11%	11%	11%	11%

Table 9.5: Type of crime of suspects classified by the Police as drug users, 2001-2007

I. Suspects may commit more than one type of offence; percentages do not add up to 100. Source: HKS, KLPD/DNRI, group Research and Analysis.

Drugs and violent crimes

The Dutch government aims at reducing violence related to substance use (T.K. 28 684, nr. 65). Within this framework, three pilots were started, in which the police would gather information about substance use in cases of violent crimes. Goal of this information was to support the police in choosing the right judicial and preventive measures for violent offenders. The police in three regions experimented with testing of substance use in cases of violent offenders. They investigated possible use verbally during the interrogation, they observed the offender, and they applied a test for alcohol or drug use. For drugs, a saliva or sweat test was administered on those who were caught 'in flagrante delicto' (Drugwipe®5). Tests were applied on a voluntary basis.

The pilots were evaluated in research (Bruinsma et al., 2008). It was shown that the police did not comply with the pilot protocol: drug use was not interrogated systematically, tests were only sporadically administered, and if they were administered, this happened in a selective way. The pilot did not contribute to the knowledge about drugs and violence.

Driving offences

From October 2008 until January 2009, a pilot "Drugs and traffic" was run in three police teams in the south of the country, in which the police tested the detection of drug use amongst drivers by using a saliva tests (Evaluatie pilot, 2009). Use of cannabis, cocaine, amphetamines and opiates was tested. 49 of 57 arrested drivers participated in the test, which was applied on a voluntary basis. The drivers were arrested on the basis of a deviant way of driving, their behaviour and results of reaction tests. Besides saliva, blood or urine tests were administered.

- Cannabis use was detected most often with the saliva test.
- Other drugs had a very low prevalence according to the saliva test.
- Saliva tests give more positive results than blood analyses, thus causing false positives.
- The police concluded that the use of saliva tests can have operational relevance. It is simple and quick when compared to existing tests. An adaptation of the law, however, is necessary,

because the procedure with regards to drugs and driving is complicated and unclear. A saliva test will have little additional value under the existing law (Evaluatie pilot, 2009).

Conclusion

The figures in this paragraph showed that the police arrests mainly male drug users, with a mean age of 39 years, who are repeat offenders and who committed mainly property crimes with or without violence. This type of crimes decreases, but violent crimes against persons show an increasing trend. How many violent crimes are related to drug use, is not known. The limited recent figures about drugs and driving show that of all drugs (except alcohol), cannabis use occurs most frequently amongst drivers.

9.2 Prevention of drug related crime

9.2.1 Prevention of drug-law offences

Drug law offences can be prevented by for instance surveillance of the police. It is, however, difficult to say how many drug law offences are prevented by these surveillance activities. It can only be estimated in a very rough way, for instance by assuming that the proportion of offences that is prevented equals the proportion of arrests for drug law offences. According to Van Ooyen et al. (2009), an estimated 117 million euro is spent in prevention of drug law offences. This estimate, however, should be interpreted with a lot of care because of the lack of specificity. There are no specific data available.

9.2.2 Prevention of offences committed by drug users

For youngsters who are at risk for problematic drug use and/or who come into contact with the police and the criminal justice system, there are so-called local "Safety houses", in which relevant agencies (police, municipalities, youth care, youth probation services, addiction care etc.) deliberate about the best way to handle the case of individual youngsters. A plan is made to stop the negative trend in the youngsters' life. The sanction for the offence is often conditional: participation in treatment is offered as an alternative to a sanction (T.K. 28 684, nr. 1, 2002; Rijksvoorlichtingsdienst, 2007). In 2009, there are 41 safety houses in cities all over the country. They offer a combination of prevention and repression and they can intervene in an early phase of the process.

A lot of activities aim at the prevention of criminal recidivism of drug users. Participation in care as an alternative to prison and under supervision of addiction probation workers ('coercive care') is promoted. Special attention is given to prolific offenders who have very high rates of crime. They are casus for consultation in the "safety houses". Besides participation in care programmes as an alternative to prison, a special measure of Placement in an Institution for prolific offenders is in force since 2004 (see below).

9.3 Interventions in the criminal justice system

9.3.1 Alternatives to prison

A considerable fraction of crime and recidivism in the Netherlands is attributable to drug (or alcohol) users (Tollenaar et al., 2008). Reduction of recidivism is one of the priority areas in the Security Program of the government (T.K.28 684, nr. 1, 2007). The general principle is that this type of crime can only be reduced by offering drug users help for their problems and their addiction. This viewpoint was confirmed again in 2008 (T.K.24587/299; T.K. 31110/5). An important way of reducing the crimes committed by drug users is offering them a care programme as an alternative to prison and under judicial supervision of addiction probation services. The number of these coercive referrals shows a rising trend.

- The approach of drug using offenders should be fine-tuned to the individual criminogenic factors, and should consist of effective diagnosis, behavioural interventions, care and treatment in a judicial framework (T.K.24587/299). Supervision of probation services on compliance in coercive treatment will be intensified. A gradual return into society and a well-organised connection between detention and after care should lead to a continuous approach. Co-operation between municipalities, schools, care agencies, housing corporations and justice agencies is demanded. This policy is running.
- In July 2008, the new law for conditional release from prison came into force (Stb 2007/500; Stb 2008/194). Under this law special conditions for release (like referral to care) can be imposed, which's compliance can be supervised by probation agencies (Stb 2008/218). Also, the Public Prosecutor will get more competences to send a person who drops out of such a kind of treatment, immediately back to prison.
- In 2008, referral to care programs from the criminal justice system took place more than 4,000 times, which is more than in the years before. Most referrals concern non-clinical addiction care (1,523 times in 2008, more than in 2007). Clinical addiction care was chosen 819 times in 2008, somewhat more than in 2007. Non-clinical psychiatric care was chosen 651 times and social care 338 times. Most important changes compared to 2007 are the increase of referrals to non-clinical psychiatric care, psychotherapy and crisis reception centres (www.svg.nl).

9.3.2 Other interventions in the criminal justice system

The following services and judicial measures are applicable for drug users (and other offenders) in the criminal justice system in 2008 and 2009:

- addiction probation services
- (reintegration) programs and facilities in prisons
- the Measure of Placement in an Institution for Prolific Offenders (ISD)
- aftercare
- basic medical and mental health care (see § 9.5).

Addiction Probation Services

Addiction Probation Services saw 18,039 clients in 2008. This number is higher than in the years before (table 9.6).

- The mean age of clients is 37,6 years.
- 92% is male.

Clients:	2002	2003	2004	2005	2006	2007	2008
Total number	12,399	14,579	14,875	15,574	16,385	17,103	18,039
Mean age"	35	35,3	35,6	36,1	36,5	37,6	37,6
Male	92%	92%	92%	92%	91%	91,9	92%
Primary problem is alcohol	38%	40%	43%	46%	47%	47%	II
Primary problem is opiates	25%	21%	18%	16%	15%	14%	II
Primary problem is cocaine/crack	26%	27%	25%	24%	24%	23%	II
Primary problem is cannabis	6%	6%	7%	8%	8%	9%	Ш

Table 9.6: Clients of addiction probation services 2002-2008

I. Data from one agency not available in 2005; dummies included. II. No information available for 2008. Source: Information Services for Addiction Care/SIVZ, 2008 and www.svg.nl.

The activities of Addiction Probation Services 2002-2008 are shown in table 9.7. Most remarkable findings are:

- There is an increasing trend in the number of activities of the addiction probation services. In 2008, they carried out almost 46,000 activities for clients.
- Supervision of clients, diagnoses of clients and the writing of advisory reports were carried out most often in 2008.
- The function of supervision is subject of redesign (T.K.29270/14). Supervision means controlling the (ex)offender, but it also should be aimed at motivating and stimulating the (ex)offender and at support of behavioural changes (T.K.29270/20).
- Diagnoses are carried out (partly) by using the standard instrument RISc (Risk Assessment Scales, *Risico Inschattings Schalen*).

Table 9.7:	Types of assistance offered by addiction probation services and number of times
	the service was provided, 2002-2008 [/]

Type of assistance	2002	2003	2004	2005	2006	2007	2008
First visit to arrestee/prisoner in remand	3,629	4,305	4,110	3,962	4,400	4,123	4,160
Report to judge with advice regarding continuation of remand custody	995	922	889	1,152	1,494	1,408	1,564
Referral to care programs	1,568	2,115	2,254	2,081	3,226	3,684	4,005
Supervision of clients in the framework of a judicial decision	2,407	3,726	4,919	5,454	7,880	9,728	10,679
Interventions/Reintegration programs	1,696	2,566	2,929	2,806	2,624	1,948	1,500
Supervision of working sentences	3,382	4,098	4,650	4,904	5,293	5,267	5,322
Supervision of learning sentences	139	217	241	286	360	294	329
(Advisory) reports	7,587	8,746	8,369	8,454	8,931	8,658	8, 568
Diagnoses ^{II}		10,615	10,605	11,504	9,935	9,719	10,075
Total number of activities	31,451	43,900	39,994	40,603	44,143	44,829	46,202

I. No figures on case level, no specification for type of drug/alcohol/gambling II. Introduced in 2003, RISc's included. Source: Foundation of Addiction Probation Services, 2008 (www.svg.nl).

Programs and facilities for drug users in prison

Detained drug users can make use of medical and psychological care in prison. They can choose to stay in special units (*Verslaafden Begeleidings Afdelingen, VBA*) and – under certain conditions - they can participate in behavioural interventions which are offered by addiction probation services (Van Ooyen et al., 2009).

There are about 200-300 persons in the special units VBA; not all of them are addicts. VBA will be discontinued. Instead, 700 special care places will be created. Part of these places will be bought in regular mental health and addiction care outside the penitentiary institutions, and another part will be concentrated in five penitentiary psychiatric units.

Behavioural interventions are available for those detainees who have a sanction of at least four months. The interventions are accredited by a special Commission for Behavioural Interventions. The interventions are judged by this Commission and must comply with certain guality criteria.

For addicts, there are two interventions that got an accreditation in 2009: the short lifestyle training and the lifestyle training.

Measure of Placement in an Institution for Prolific Offenders (ISD)

 Since 2004, the measure of Placement in an Institution for Prolific Offenders ISD) is in force (Stb 2004/471). This is a judicial measure for prolific offenders of over 18 years old. An estimated 95% of ISD-detainees is a hard drug user (Biesma et al., 2006). ISD can be applied for a maximum of two years. The aim of the measure is to safeguard society from the frequent offences committed by prolific offenders. Also, behavioural interventions are offered to the offenders, in order to reduce their recidivism. These can be given inside the penitentiary institutions or outside in regular care facilities. They should be motivated to participate in these interventions and to change their behaviour. They stay in a trajectory regime. Those who are not motivated or for whom no interventions are available will stay in a basic detention regime. ISD is executed in eight penitentiary institutions which are especially equipped for ISDdetainees.

- In January 2005, the first participants entered ISD. The number increased until 2008. In 2008 there is a slight decrease (figure 9.2). In 2008 there were a mean of 607 persons per month under the ISD. The highest number that was reached until now was 679; this was in June and August 2007. There are big differences per region and institution.
- The percentage of ISD-participants of the total number of detainees was 5% in 2007 and 2008. This percentage is more or less constant over the years (range 4,9% to 5,1%).
- In 2008, 142 ISD-participants (24%) stayed in basic detention regime. 332 (56%) stayed in a trajectory regime within the penitentiary institution and 119 (20%) in a trajectory regime outside the penitentiary institution (figure 9.3). There is a stronger focus on participation in a trajectory regime than was expected beforehand (Van Ooyen and Goderie, 2009).



Figure 9.2: Number of participants per month in Institutions for Prolific Offenders, 2005-2008

Source: Service for Judicial Facilities, 2009.





Source: Service for Judicial Facilities, 2009.

Aftercare <u>NNIA.</u>

Conclusion

With regards to interventions for drug users in the criminal justice system, the general principle is that their criminal behaviour can only be reduced by offering them help for their problems. Coercive referral to care programs is stimulated and the figures show that the number of these referrals is rising. About 600 prolific offenders, the majority of whom have some kind of drug problem, stay in a special institution for prolific offenders. Behavioural interventions are applied. Addiction probation services have an increasing number of clients.

9.4 Drug use and problem drug use in prison

Bulten and Nijman (2009) studied 191 randomly selected detainees – in remand or convicted - in the first phase of their detention. The study was carried out in one penitentiary institution ("Vught"), where regular units were selected. The study used the Mini international neuropsychiatric interview to assess the prevalence of drug addiction and other psychiatric symptoms. It was shown that 30% of the detainees (range 23-36%) suffered from a drug addiction in the year before their imprisonment (Bulten and Nijman, 2009).

Goderie (2009) studied files of 97 persons who were convicted to a measure of ISD, which means that they are prolific offenders. 82 were male, 15 were female. Mean age was 39 years. 83% had problems with the use of drugs of any kind. 60% used cocaine, mostly in combination with heroin (28%) or heroin and alcohol (9%); 13% used only cocaine; 43% used heroin, mostly in combination with alcohol and/or cocaine. Only 2% was a problematic user of cannabis (Goderie, 2009).

9.5 Responses to drug related health issues

In 2008 a guideline for medicinal care for addicted detainees was published (*Richtlijn Medica-menteuze zorg aan Gedetineerde Verslaafden*) (Kwaliteitsinstituut, 2008). The guideline concerns administration of methadone, the use of benzodiazepines and psychiatric medication during imprisonment. Reduction of methadone should happen in close consideration with the detainee and, if possible, external physicians of addiction care services.

9.6 New developments

There are some relevant new developments with regards to drug users in the criminal justice system (Ten Holte, 2009; Preventie, Openingsrede Symposium Verslaving en Criminaliteit, Utrecht, 5 oktober 2009). In general, the government aims at more and better care for detainees with problems, in which combinations of sanctions and treatment are aimed at ("quasi-compulsory treatment"):

• The implementation of "Safety houses" (mentioned in § 9.2.1) continues.

- Priority is given to administering conditional sanctions by the courts, in which the condition consists of treatment outside the penitentiary institution and the type of condition is specified in the court order. A pilot with addicted offenders is running.
- There is a new law upcoming, which regulates forensic care for detainees (Act Forensic Care, *Wet Forensische Zorg*). It aims at providing better and more care facilities for detainees with problems, especially outside the penitentiary institution. The new law will be sent to the Parliament in December 2009, but it is brought in practice already. An element is the purchase of care for detainees who are willing to participate in treatment as an alternative to imprisonment.
- For detainees with serious problems, there will be five new Psychiatric Penitentiary Centres.
- A new law is in preparation, which facilitates compulsory admission of persons with psychiatric problems in treatment centres, under certain strict conditions (Act for Compulsory Mental Health Care, *Wet verplichte GGZ*).
- Trends in criminality victim surveys as well as police statistics and monitoring systems show that property crimes are decreasing. This is (partly) due to a reduction of inflow of addicts whose primary drug problem concerns opiates. This group always committed a lot of property crimes. Several factors contribute to this development: the more stringent judicial approaches, the fact that this group gets older, improvements in facilities, and the measure of Placement in an Institution for Prolific Offenders (Van Ooyen, 2009). Violent crimes by drug users show an increasing tendency.

10 Drug markets

10.1 Availability and supply

10.1.1 Availability

Recent developments

Some recent developments – i.e.changes in the price and/or purity of drug samples (see §10.2), seizure data and data from qualitative studies (Antenna monitor) - point at a reduced availability of MDMA. Since the fall of 2008 an increasing proportion of ecstasy pills contain adulterants and a decreasing proportion of ecstasy pills actually contain MDMA (Van Dijk et al., 2009). Users also indicate to have difficulties in obtaining (good quality) ecstasy (Benschop et al., 2009). Prices of large quantities (e.g. 10,000) of ecstasy pills and a kg of MDMA powder have increased. Although this trend has not had major effects at retail prices, it did affect purity of ecstasy pills bought by consumers. Moreover, a reduction has been observed in the purity of amphetamine in amphetamine powders (see §10.2). It has been suggested that the intensified control of the borders and other measures related to the Olympics in China in 2008 has resulted in a reduced availability of PMK (precursor of ecstasy) and BMK (precursor of amphetamine). However, these explanations cannot be verified. There are also indications for a reduced availability of cannabis (see chapter 11).

(Perceived) availability of drugs

According to the Dutch National School Survey in 2007, the proportion of pupils of 12-18 years who perceive a drug as being easily or very easily available is largest for cannabis (28%), followed by both ecstasy (11%) and cocaine (11%) (Monshouwer et al., 2008). More boys than girls rate these drugs as being easily or very easily available, and this percentage also strongly increases with age. In § 2.2, it has been reported that the ESPAD survey showed a significant increase in the proportion of pupils of 15/16 years who perceived cannabis to be (very) easily available, from 42% in 2003 to 49% in 2009, but there is no explanation for this finding.

According to key informants of the Antenna-monitor, it is very easy for nightlifers to obtain cocaine in Amsterdam. Deliveries are usually accomplished within half an hour to an hour after contacting a dealer by phone. Over half (55%) of the recent cocaine users among clubbers in Amsterdam had bought cocaine themselves, most often through dealers who operate by means of mobile phone (41%), followed by a dealer at home (14%) and/or a dealer in the nightlife scene (5%) (Benschop, 2008).

Coffee shops

Most information is available on the availability of cannabis (see also Chapter 11). In the Netherlands, the sale of cannabis is regulated through the system of coffee shops⁷ but these are not equally distributed throughout the country. In the 24% of all municipalities where coffee shops are present (see later), the threshold to obtain cannabis is generally low, especially in the big

⁷ Cannabis can be obtained in coffee shops that adhere to certain criteria (AHOJ-G; see chapter 1).

cities with a relatively high 'coffee shop density" (e.g. number per 10.000 inhabitants). It has been estimated that in the municipalities with officially tolerated coffee shops, about 70% of the local cannabis sales goes *directly* through the coffee shops. Other sources (e.g. dealers operating by mobile phone) may be more relevant for those not living in municipalities with coffee shops (see under 'coffee shops') or for young people under the age of 18, who are not allowed to enter coffee shops. In § 11.1.5 it will be shown that the number of coffee shops has been decreasing in the past years.

10.1.2 Supply situation 2008/2009

The supply situation is described in recent reports of the National Police (Lieuwen and Rengelink, 2008; Boerman et al., 2008). The evaluation of the Dutch drug policy, which was conducted in 2009, also gives attention to the supply situation (Van Laar and Van Ooyen, 2009). The data reported here are drawn from these reports.

Criminal cooperatives are involved in production and trafficking of drugs in the Netherlands. The fight against organised crime in relation to drugs is an important priority area for police forces and Public Prosecutor in the Netherlands. A three-way approach is applied: (1) administrative and preventive measures, (2) judicial approaches and (3) international co-operation (T.K.29911/10,11). The first approach is the responsibility of local authorities, mainly mayors. There is close co-operation between public and private parties. Financial-economic approaches are used and will be strengthened.

Supply of cannabis: See Selected Issue, Chapter 11.

Supply of cocaine:

- Colombia, Peru and Bolivia are the main source countries for cocaine. Trafficking routes go via Brazil and Argentina and the Caribbean. Recently, the route via Western Africa is becoming more important. The Netherlands is an important transit country, after Spain and Portugal. Schiphol Airport and the port of Rotterdam are important entrance points in the Netherlands. An estimated 90% of the imported cocaine will be transferred abroad. The number of cocaine couriers at Schiphol Airport decreased, as did the amount of drugs in cargo and luggage. Cocaine is imported with new methods recently, in impregnated materials and fabrics. It is extracted in the country of arrival.
- The investigation and enforcement of trafficking of cocaine is still one of the priorities of the police forces and the Public Prosecutor, also for 2008-2012. Enforcement aims at organised criminal groups involved in the trafficking. An important target of the policy is to improve international collaboration within the European Union.
- Retail prices are relatively stable and lower than in the nineties. Purity varies, but was good in 2007 and 2008: 95% of samples of cocaine in 2008 contained cocaine, with a mean concentration of 55%. Contaminations seem to increase. Recent use of cocaine stayed stable, except for the nightlife, where cocaine became more popular in the last decennium. These indi-

cators suggest small changes in de market of cocaine, especially with regards to quality, which could indicate a recent worsening of the supply.

Supply of heroin:

- Afghanistan is the major producer of the heroin in the Netherlands. The heroin is trafficked via three routes: Central-Asia, Kazakhstan and the Russian Federation, via Iran (or Pakistan) over Turkey and the Balkan region, or – more recently – via Iran and the Black Sea to Europe.
- The Netherlands is mainly a transit country and a distribution centre for heroin.
- The trafficking of heroin by organised criminal groups is one of the priorities of the police forces and the Public Prosecutor for 2008-2012.
- The market situation of heroin in the Netherlands seems relatively small and stable, according to street prices, purity and use. Street prices are relatively low and purity and quality are good. There were no big changes in the recent period.

Supply of synthetic drugs:

- The Netherlands play a central role in the production and export of ecstasy. Its role seems to be less important than a few years ago. Production spread to other countries like Canada and Australia.
- Organised crime with regards to synthetic drugs is a priority area for the police and the Public Prosecutor for 2008-2012.
- In 2008, 21 dismantlements of production locations were reported (table 10.1). There is a
 decrease since 2006 and certainly compared to 2001-2004. The police signals that the locations were bigger and more large-scale than before, but that there were no large seizures in
 2008. Locations were mainly found in the west and the south of the country. Seizures were
 very low in 2008, as was the number of waste dumpings.
- There are changes in the production processes of ecstasy: the process is more often split into different parts on different locations, also mobile ones. This could be interpreted as an attempt to spread the risk of detection, which might be caused by the more intense law enforcement.
- Seizures of precursors were very low in the last years.
- Until 2008, the seizures in combination with decreasing retail prices and increasing trends in purity, gave the impression that ecstasy was well available on the Dutch user market. In the course of 2008 and in 2009, however, the concentration of MDMA or MDMA-like substances decreased substantially and the fraction of tablets with other non MDMA-like substances rose. This worsening of the quality of ecstasy could be caused by a lack of precursors.
- Amphetamine production places were only found in one province of the Netherlands. This market is small in the Netherlands. The purity of amphetamine worsened in 2008, which might also be due to a lack of precursors.

Table 10.1:	Number of production locations for synthetic drugs that were dismantled 2000-
	2007

	2001	2002	2003	2004	2005	2006	2007	2008
Production locations	35	43	37	29	18	23	15	21
Waste dumpings	127	105	95	81	51	42	50	36
			-					

Source: KLPD-DNR, Unit South Netherlands, 2009.

New developments in 2009

New are the above mentioned recent changes in the markets of ecstasy and amphetamine and the changes in the market of cannabis mentioned in Chapter 11. These changes could be interpreted as indicators for a decrease of production and supply, according to the literature (see: Van Ooyen et al., 2009). It is not known whether this situation will continue.

Conclusion

The figures in paragraph 10.1 point at a reduced availability of MDMA and changes in the production process. The figures also show some changes in the supply of cocaine: new routes and new methods are used for the import of cocaine, whereas contaminations seem to increase. The supply situation of heroin seems relatively small and stable.

10.2 Seizures

Figures about seizures in 2008 are reported by the National Police Force. Figures include seizures by police forces, Royal Military Police, Customs and Fiscal Information and Investigation Service (the tax authorities). For 2008, 21 of the 28 agencies reported all the data. Registration methods and definitions differ per police region, which leads to unreliability in the information and makes it difficult to interpret the figures. We truncate the figures and seizures less than 10 kg/litres are not reported. Figures do not permit conclusions about developments and trends. They must be seen as a minimum estimate of seized drugs in the Netherlands.

The following seizures are reported by the National Police Force for 2008 (KLPD-Dienst IPOL, 2009):

- Cannabis resin: 24,440 kilos
- Herbal cannabis/nederwiet: 42,360 kilos
- Cannabis plants: 1,053,370; cuttings and toppings: 302,980
- Heroin: 800 kilos (plus 12 kilos of opium)
- Cocaine: 6,760 kilos
- Amphetamine: 1,110 kilos and 45 litres of oil
- Ecstasy MDMA/MDA/MDEA: 85 kilos, 250,220 tablets, 300 litres of oil
- LSD: 517,830 trips
- GHB: 140 litres
- Methadone: 4,560 tablets
- mCPP: 7,760 tablets
- BMK: 230 lires.

10.3 Price/purity

10.3.1 Purity

The Drug Information and Monitoring System (DIMS) of the Trimbos Institute provides detailed information on the quality of 'ecstasy' and other drugs submitted by consumers at test locations of drug treatment services. Some of the submitted tablets can be identified visually on the basis of comparing specific characteristics (colour, logo, weight, diameter etc.) and reaction in the Marquis test with previously analysed tablets. All other samples are sent to the laboratory for chemical analysis. In 2008 DIMS received a total of 3,845 tablets (or pills), of which 3,621 were analysed in the laboratory (See also Standard Table 15). In the text below, a distinction will be made between pills or other samples *sold as* ecstasy, amphetamines and cocaine. Data on powders (mainly cocaine and amphetamine) are also included in this paragraph.

Ecstasy: decreasing proportion of pills with MDMA

In 2008, a total of 3,775 ecstasy pills were delivered to DIMS, of which 60% was sent to the laboratory. In the first half of 2009 only DIMS received 4,240 ecstasy pills. This increase is probably associated with increasing awareness of the changes on the ecstasy market. Table 10.2 shows the percentage of analysed tablets containing certain substance(s), or a combination of substances. These categories are mutually exclusive.

- The total percentage of ecstasy tablets containing <u>only</u> MDMA (or an MDMA-like substance, such as MDEA, MDA) as the only scheduled drugs has gradually decreased between 2004 and 2007, with a stronger decrease in 2008. Moreover, preliminary results for the first half of 2009 indicate that this trend has further continued. Looking at the percentage of ecstasy pills containing an MDMA-like substance (both with or without other pharmacologically active substances) the trend is generally stable until 2007 (91%), and then starting to decrease in 2008 (80%) and the first half of 2009 (70%).
- At the same time the percentage of tablets containing miscellaneous substances has increased. This was mainly due to an increase of tablets containing mCPP, either with or without an MDMA-like substance, but in 2009 also other substances were found, such as mephedrone and 4-fluoramphetamine.
- (meth)amphetamine was detected in about 2% of the samples (both with and without an MDMA-like substance).

Table 10.2: Content of tablets sold as 'ecstasy' based on laboratory analyses

		2004	2005	2006	2007	2008
Nu	mber of tablets analysed	1985	2140	2523	2319	2183
-	Only MDMA-like sub- stances	91.90%	88.60%	83.20%	84.60%	70.50%
-	(Meth)amphetamine	0.80%	4.00%	1.80%	0.70%	1.10%
-	MDMA-like substances and (meth)amphetamine	0.30%	1.40%	2.20%	1.30%	1.40%
-	Others	4.50%	0.30%	4.50%	3.80%	7.40%
-	Miscellaneous	2.50%	5.70%	8.30%	9.60%	17.70%

Categories correspond to Fonte table 15. Category 'others' may include samples with MDMA and for example caffeine and other pharmacologically active non-scheduled substances. Source: DIMS, Trimbos Institute.

- Figure 10.1 illustrates that the concentration of MDMA in tablets has always shown a wide variation.
- The proportion of relatively high dosed tablets (106-140 mg) remained stable at 30% in 2007 and 2008, but sharply decreased to 9% in the second quarter of 2009.
- The average amount of MDMA in pills containing at least 1 mg MDMA increased from 74 mg in 2006 to 82 mg in 2007(82 mg) and stabilised at 81 mg in 2008 (maximum 203 mg). In the first half of 2009, the average concentration decreased to 65 mg.
- These developments (% of ecstasy pils containing MDMA, decreasing concentration of MDMA) point at a reduced availability of MDMA (see also §10.1)

Figure 10.1: Percentage of ecstasy tablets by content of MDMA (mg)



Source: DIMS, Trimbos Institute. Only ecstasy tablets tested in the laboratory and containing at least 1 mg MDMA or more have been included.

For data on *amphetamine purity*: see chapter 12.

Cocaine: large proportion of powders with medicines, especially levamisole

In 2008, 671 powders sold as cocaine were analysed (630 in 2006 to 721 in 2007).

- In 2008, almost all (96%) of samples did indeed contain cocaine (among other substances), with an average concentration of 55% (57% in 2007, no substantial change from previous years).
- 3% of the samples solely contained another psychoactive substance(s) and 1% contained no psychoactive substance at all.
- The overall proportion of cocaine samples with pharmacologically active adulterants or diluents in cocaine powders remained high (see figure 10.2). However, there were some marked changes related to specific adulterants.
- The proportion of powders containing phenacetin decreased, although this trend did not seem to continue in 2009. Phenacetin is an analgesic withdrawn from the medical market because of serious kidney damage in chronic use with high therapeutic doses
- The proportion of samples containing levamisole strongly increased. In the first half of 2009, half of the cocaine powders contained this medicine. Levamisole is an anthelminticum (used mainly for veterinary purposes) and anti-cancer drug, but the drug is not officially registered for human use in the Netherlands.

In North-America, the use of cocaine adulterated with levamisole has been associated with serious blood diseases. In the Netherlands no such cases are known, but the risk assessment committee (CAM) started a quick scan to find out more about the risks of levamisole. A semi-quantification of 300 cocaine samples collected by the Netherlands Forensic Science Institute suggests that the average concentration is relatively low (3,7% levamisol) but higher values are found as well. A quarter (26%) of the cocaine samples contained less than 1% levamisole, and almost half (48%) fell between 1 and 5%. Twenty percent of the cocaine samples contained between 5% and 10%. Higher concentrations were rare: only 3% of the cocaine samples contained between 10 and 15% levamisole, and 3% contained between 15 and 25% levamisole (personal communication A. Poortman, NFI).



Figure 10.2: Percentage of cocaine samples containing medicines

Source: DIMS, Trimbos Institute.

Other substances

In 2008 the total number of drug samples (powders, pills, liquids) was 4,671. Some substances found relatively often were mCPP (331 times, mainly found in tablets sold as 'ecstasy'), ketamine (65 times), and GHB (234 in 2009). Also 2-CB is increasingly detected in drug samples (75 times in 2008). It should be noted, however, that these trends may be influenced by an increase of samples delivered to DIMS, degree of (unwanted) adulteration, and popularity of some substances.

Cannabis

Since 1999 the Trimbos Institute also monitors THC content and prices of cannabis (THCmonitor) (Pijlman et al., 2005). Samples of different cannabis products (about 1 gram each) are regularly procured from a random sample of 50 coffee shops and chemically analysed. Figure 10.3 shows the average concentration of THC in Dutch marihuana ('nederwiet'), imported marihuana and imported hashish (see also Standard Table 14). Two types of samples of Dutch marihuana were bought: the most "favorite" variety (normally reported here, unless mentioned otherwise) and the most "potent" variety, according to the perception of owners of coffee shops.

- Dutch marihuana contains about three times more THC than imported marihuana.
- Between 2000 and 2004, the percentage of THC in Dutch marihuana increased significantly. However, from 2004 to 2005, a marked decrease occurred. In 2006 the average THC concentration (17.5%) remained at the same level as in 2005 (17.7%) and dropped again in 2007 (16.0%). In 2008, the average concentration THC in Dutch marihuana has not altered markedly (16.4%). Since 2001, the average concentration of THC in the most favorite variety is not significantly different from that of the most potent variety (16.5% in 2007 and 17.7% in 2008).
- The THC concentration in imported marihuana shows no significant alteration over the years.
- The most remarkable finding concerned the drop in the percentage of THC in imported hashish from 18.7% in 2006 to 13.3% in 2007. This finding is not easy to interpret. Figures from 2008 show a partial 'recovery' in the percentage of THC to 16.2%. Perhaps the harvest conditions of 2006 to 2007 were unfavourable for the marihuana plants in the oriental countries were the hashish is imported from.
- THC concentrations are highest in hashish derived from Dutch hemp ('nederhashish'), a relatively unpopular and uncommon cannabis variety. The annual number of samples is low (14 in 2007), which contributes to the variability of results across years. The average THC concentration was 28% in 2008, and varied between 33 and 26% in the previous four years.



Figure 10.3: Average THC percentage in cannabis products

Source: THC-monitor, Trimbos Institute (Niesink et al., 2008).

- The relatively high THC content in Dutch hemp is probably due to highly professional cultivation methods.
- As a result of intensified law enforcement in the area of marihuana cultivation (see National Report 2006, §1.2; and § 8.2 of this report), it might have become more difficult to obtain marihuana with a good quality standard in Dutch coffee shops. Retail prices have risen (see section "Prices" below) and there are indications that this could have contributed to adulterating of Dutch cannabis products in recent years, to increase their weight and thus to maintain the profit. Various 'suspected' samples of cannabis have been examined (Van Amsterdam et al., 2007). Some did indeed contain adulterants, such as glass beads or sand, but further research showed that this was not the case with samples that were sold in Dutch coffee shops.

10.3.2 Prices

Sources on the price of drug samples are DIMS/THC-monitor, surveys in Amsterdam (Antenna) and the two-yearly Trendwatch monitor (no new data for 2008). Moreover, the police (KLPD) also reports on prices, based on regional data, but the underlying sources/methodology for collecting data are quite variable (KLPD/IPOL, 2009). It should be noted that prices may vary widely between regions, but a reliable picture on regional differences is not available.

Cannabis

- According to the THC-monitor, the average retail price of a gram of imported marihuana is consistently lower compared to other cannabis products (table 10.3; see also Standard Table 16).
- The retail price of Dutch marihuana increased significantly from 2006 to 2007 (+18%). 2008 shows a further increase in the retail prices of Dutch marihuana products, especially of the most potent variant of Dutch-grown marihuana (€ 9.8 per gram compared to € 8.5 in 2007 and €7 in 2006; not in table).

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Dutch marihuana	5.8	5.9	6.1	6.4	6.0	6.2	6.2	7.3	7.7
Imported marihuana	3.9	4.0	4.2	4.3	4.9	4.1	4.4	4.3	5.2
Imported hashish	6.3	6.4	7.1	7.6	6.6	6.8	7.3	7.7	8.1

Table 10.3: Average retail price per gram of cannabis products (in €)

Source: THC-monitor, Trimbos Institute (Niesink et al., 2008).

The police also reported that the price per kg Dutch marihuana has increased between 2006 and 2008 (3.350 euro in 2008) (KLPD, 2009).

Prices other drugs

Retail prices of other drugs reported by users who delivered their drugs sample to DIMS did not change much over the past three years (see Standard Table 16). In 2008, the price of an ecstasy tablet varied between 1 and 10 euros and one gram of cocaine between 25 and 70 euros.

Amphetamine is much cheaper than cocaine - one gram will cost between 5 and 15 euros - which is sometimes mentioned as a reason to use it as a substitute for cocaine (Van der Poel et al., 2005).

	Heroin	Cocaine	Amphetamine	LSD	Ecstasy
Sample size (n)	24	637	843	67	1766
Mean price (€)	40	50	6	4	2
Minimum (€)	15	25	5	4	1
Maximum (€)	60	70	15	10	10

I. Heroin, cocaine, amphetamine prices are in euro per gram. II. Ecstasy price is in euro per tablet and LSD price is in euro per dose. Source: DIMS, Trimbos Institute.

Data from prices reported by last year users among visitors of clubs in Amsterdam showed that retail prices for cocaine bought from dealers operating by mobile phones (most common source; 48 euro on average) and home dealers (43 euro on average) remained stable between 2003 and 2008. However, a gram of cocaine bought in the nightlife scene – a less common source - was less expensive (53 euro in 2003 against 41 euro in 2008) (Benschop et al., 2009). Prices paid by club visitors for an ecstasy pill varied in 2008 between 0.3 and 10 euro per pill, with lower prices for larger purchases. Average prices varied between 2.7 euro per pill, which was bought at a dealer (home), and 3.6 euro per pill bought in the nightlife scene. Prices were lower in 2008 compared to 2003.

Data from the police suggests that prices for heroin, cocaine, amphetamine and ecstasy remained fairly stable between 2006 and 2008, but the quality of the data does not allow firm conclusions (KLPD, 2009).

Part B: Selected issues

11 Cannabis markets and cultivation

The data reported here are mainly drawn from the recent evaluation of the Dutch drug policy, which was published in July 2009 (Van Laar and Van Ooyen-Houben, 2009). The description is based on different sources of data: policy documents, registration data from agencies in the criminal justice field (police, Public Prosecutor, Judicial Documentation System), research data-bases (which were used for secondary analysis) and research reports. In addition, two focus group meetings were held, in which experts in the drug field gave their view on certain issues in the evaluation report.

11.1 Market

11.1.1 Brief history of cannabis cultivation

Cannabis use in The Netherlands came up in the sixties, like in many other Western countries, and spread since then (Devresse and Duprez, 2008). 'Normal' youngsters and students were the main user groups. There was some small-scale home cultivation in the Netherlands, but the main flow of cannabis came from abroad, from countries like Morocco, Pakistan and Lebanon. The cannabis was trafficked over sea and over land via Spain, France and Belgium. This situation changed in the course of time. The use of cannabis increased and new groups of users entered the market.

In the years that followed, there was a growing share of Dutch home-grown cannabis, 'nederwiet'. More sophisticated cultivation techniques contributed to this development, in combination with a considerable and growing group of users in the Netherlands and abroad. The cultivation became more professionalized and commercial.

In the nineties, the cultivation and trafficking of Dutch cannabis was formally defined as a major problem (Ministerie van VWS, 1995). The cultivation is described then as small-scale home-cultivation, but at the same time is it observed that the 'nederwiet' is successful and that it is evident that a 'nederwiet' market is coming up. This 'nederwiet' contained sometimes relatively high concentrations of THC, which was also seen as a possible problem. The involvement of organised crime, with the money laundering and corruptive effects it can have for society, was another problem around cannabis cultivation that was signalled in 1995.

The production and trafficking developed further in the period after this. In 2003, research was carried out into Dutch cannabis cultivation (Bovenkerk and Hogewind, 2003). Interviews were held with police officers and observations were made during dismantlement of cannabis plantations. They gave an alarming picture. Bovenkerk and Hogewind concluded that cannabis cultivation had become wide-spread and professional. The authors signal that a lot of cultivation took place in private houses, where citizens, especially inhabitants of disadvantaged districts and trailer camps, used professional installations to produce cannabis. According to Bovenkerk and Hogewind, criminal cooperatives were involved in cultivation. They suppose that these groups install the plantations. This conclusion is based on the observation that the plantations looked very much alike. Criminal cooperatives even would exert compulsion on citizens to cultivate cannabis and threaten them in a violent way.

Spapens et al. (2007) conducted further research into the organisation of the cultivation of cannabis and the groups behind it. The research was carried out from July 2006 to March 2007. The researchers analysed police registrations and files of 19 closed large-scale criminal investigations into cases of cannabis cultivation. They interviewed the public prosecutor, police officers, housing corporations, electricity companies and other agencies involved in tackling cannabis cultivation. They also interviewed 16 professional cannabis growers. The authors conclude that many people have the necessary knowledge and skills to cultivate cannabis. It is easy to obtain the materials. These can legally be bought because they are widely used in other (legal) applications, with perhaps the sole exception of the carbon filter used to eliminate the pungent cannabis odour.

Spapens et al. (2007) showed that 80-90% of the dismantled plantations were situated in private houses, mostly rented houses. This was confirmed in other research (Wouters et al., 2007). This cultivation causes nuisance (like odour, diversion of electricity, and activities of drug couriers) and danger (fire).

The cultivation of cannabis is now widespread and professionally organised. There are almost no more amateurish plantations dismantled by the police (Jacobs, 2007; Emmet and Boers, 2008). This is a consequence of new growing techniques, but it could also indicate a weakness of law enforcement which existed for a long time (Tweede Kamer, 2006, 30050-2, Handhaven en gedogen, 2006). There is a large-scale supply of high quality cannabis, for domestic consumption as well as for customers abroad. Cultivation is also exported to other European countries by active criminal cooperatives (Adviescommissie Drugsbeleid, 2009).

The supply of cannabis in The Netherlands is dominated by home-grown cannabis, 'nederwiet', plenty of which seems to be exported abroad (Emmet & Boers, 2008; Fijnaut and De Ruyver, 2008). Estimates of exported quantities, however, show large variations (Van der Heijden, 2003). The market of hashish is still dominated by other countries: Morocco, Afghanistan, Pakistan or Lebanon (Emmet and Boers, 2008).

Criminal cooperatives have been involved in the cultivation and exportation of cannabis since a longer period of time (Ministerie van VWS, 1995; Bovenkerk and Hogewind, 2003; Emmet and Boers, 2008; Fijnaut and De Ruyver, 2008; Van Ooyen et al., 2009). According to Fijnaut and De Ruyver (2008), there is no division of markets of soft and hard drugs on the level of criminal co-operatives, which cultivate and traffic drugs commercially and large-scale. There is a growing interconnection of markets of hard and soft drugs and other kinds of serious crimes like traffick-ing of humans. The criminal cooperatives use violence (liquidations, maltreatment and threaten-ing of people, especially the socially weak groups), there is a risk of corruption and their criminal money is invested in formal economy (Fijnaut & De Ruyver, 2008; Emmet & Boers, 2008). They are defined as one of the major threats to Dutch society (Boerman et al., 2008)

Individual growers, especially those in rented houses, have been a target of law enforcement in recent years, especially since 2004. Many of them have been arrested in the last years. Besides arrests and judicial sanctions, they also face eviction from their houses and fines. As a consequence of the integrated law enforcement approach of different agencies – public as well as private -, individual and ideologically motivated growers have been deterred from further cultivation.

This seems to lead to a increasing involvement of criminal cooperatives, who run large-scale plantations in premises in rural areas and are more export-oriented (Spapens et al., 2007; Wouters et al., 2007; Maalsté and Van Panhuysen, 2007; Emmet and Boers, 2008). High involvement of organised crime is also reported by Fijnaut and De Ruyver (2008). Van de Bunt and Kleemans (2008), who carry out a periodical monitor of organised crime in the Netherlands, see new players appearing on the cannabis market, consisting of criminal cooperatives who were involved before in non-drug related types of crime.

In 2008, prices of nederwiet had been increased and THC content showed a decreasing trend (see § 10.1). In addition, there were some cases of contaminations reported by the police. These data suggested a possible (slight) decrease in production of cannabis (Van Ooyen-Houben et al., 2009). It is not known whether this was incidental, or whether this might become a trend. There are no changes in recent use of cannabis.

Conclusion

All in all, the production of 'nederwiet' in The Netherlands has been increasing for a long period of time and is highly professionalized and commercialised. There are different types of growers. There seems to be a decreasing share of individual and ideologically motivated production, while there is an increasing involvement of criminal cooperatives, which are more export-oriented. The widespread cultivation of cannabis and the involvement of organised crime is a serious problem in The Netherlands anno 2009.

11.1.2 Market shares of different products

Nederwiet has the highest share in the retail sale in coffee shops. It is popular amongstcannabis users. Other products are available, but less popular (Niesink et al., 2008).

11.1.3 The supply chain in The Netherlands

The logistic process of cultivating and trading cannabis basically entails ten steps:

- acquiring grow equipment;
- acquiring cuttings;
- setting up a grow room;
- diverting electricity;
- growing the plants;
- cutting the flowering tops;
- drying the tops;
- offering the harvest to a buyer;
- getting rid of hemp waste
- trading of the product (Spapens et al., 2007).

The grow process is in most cases organised in a professional way (Jacobs, 2007; Spapens et al., 2007). Grow shops (shops where materials for the cultivation of vegetables and other legal products can be bought) in particular seem to facilitate the production process. They usually supply all the necessary legal cultivation equipment and they also give advice to growers. There

are a number of mala fide grow shops, that will refer prospective cannabis growers to sellers of cuttings, or to wholesale cannabis buyers and service providers such as electricians or builders of grow rooms. They also collect hemp waste from cannabis growers. Some grow shops even go further than this: they will deliver cuttings on the spot and buy harvested cannabis from growers. It can be assumed that these practices lower the threshold for citizens to engage in cannabis cultivation. There are also grow shops that are involved of violations of the Opium Act in one way or another.

Four types of growers are active in the cannabis cultivation (Spapens et al., 2007):

- Independent growers who operate at their own risk and use their own money to grow some 100 to 1,000 plants on their own premises. They get their grow supplies, equipment or cuttings from grow shops or from their social network. The harvest is either sold directly to coffee shops or to grow shops or other buyers.
- Larger-scale independent growers who operate plantations in (rented) commercial properties or, for instance, farm sheds, where 1,000 or more plants are cultivated.
- Operators who install five to ten plantations in other people's houses, mostly acquaintances in their social network. With occasional exceptions, there is no coercion involved in the running of these plantations. The focus of the activities is at a local level, but sometimes – dependent on the social network – plantations in a wider area or across the border are run. These operators are experiences cannabis growers and they made profit in this business. They are approached by others with the request to install a growing room for them.
- Criminal cooperatives, which are involved in buying, processing and selling cannabis products on a large scale and who, in addition, often run their own sizeable plantations. They have one or more grow shops at their disposal, or a less visible address where independent growers or operators can deliver their harvest. The nature and the quality of the product are of little importance. The products are largely exported, but also sold to coffee shops in the Netherlands, sometimes through middlemen. The key figures in these criminal cooperatives have the contacts which are needed to sell large amounts of cannabis at home and abroad. A turnover of 100 to 200 kilos per week is not unusual. Sometimes tens of millions of euros were amassed in the span of only a few years. The central players in these cooperatives have committed serious crimes before, like illegal contracting, armed robbery, and even murder and firing at police officers. They play an important role, not because they force people into installing plantations in their homes, but because they provide an assured market to independent growers and operators.

A considerable amount of the cannabis finds its way to foreign buyers. Large numbers of tourists from Belgium, Germany and France visit the coffee shops in Dutch border cities. It is estimated that it could concern thousands of foreign visitors per day. About retail outlets: see 11.1.5.

Conclusion

The cultivation processes are highly professionalized. Grow shops play a facilitating role and some mala fide ones amongst them go far into illegal activities. Several types of cannabis growers are active, ranging from small, independent growers to criminal cooperatives who run sizeable plantations.

11.1.4 Prices

Wholesale prices are not reported in a systematic way. Retail prices are reported by the Trimbos-institute, in an annual monitor of THC-concentrations and prices of cannabis in a representative sample of 50 Dutch coffee shops (Niesink et al., 2008), see also <u>ST16</u>. Table 10.3 shows the prices since 2000.

Prices of 'nederwiet' have risen, especially between 2006 and 2007. In 2008 there is a further significant rise. Especially the stronger variant rose in price (\notin 9,80 per gram in 2008 against \notin 8,50 in 2007; not in table). Prices of imported marihuana and hashish show, like the price of nederwiet, fluctuations, but they, too, seem to have increased.

THC-concentrations in nederwiet are three times as high as in imported marihuana. The concentration increased between 2000 and 2004. In 2004, the mean was 20%. Between 2004 and 2005 there was a decrease, after which there it stabilised more or less. But in second half of 2008, there was a decrease again (Niesink et al., 2008).

11.1.5 Typology of retail outlets

In the sixties and seventies, the retail market consisted mainly of 'house dealers'. They sold cannabis in youth centres and were tolerated as long as they sold only cannabis on a small-scale and non-commercial basis. In the course of time, coffee shops took over the role of main selling point on the retail market. The sale of cannabis in coffee shops is tolerated under certain conditions:

- They are not allowed to advertise, except for a brief announcement on the premises
- · Hard drugs cannot be sold and are not even allowed to be present in the shop
- They may not cause public nuisance
- They may not sell cannabis to youngsters under 18 years; youngsters are not allowed to enter a coffee shop
- They may not sell more than 5 grams of cannabis per day per client
- They may not have more than 500 grams of cannabis in stock.
- Also, they may not sell alcohol.

These conditions have been applied for a long time already, but they were broadened and sharpened in the course of time. They are formally laid down in the official prosecution directions. The non-prosecution (tolerance) is based on the expediency principle in the Dutch criminal law: the Prosecutor can decide not to prosecute for reasons of a higher identifiable general interest according to art. 167, 2 in the Code of Criminal Procedure (Aanwijzing Opiumwet 2009). In the case of coffee shops, this general interest is to be found in the prevention of hard drug use and the prevention of criminal nuisance (Van Ooyen-Houben et al., 2009). In general, research has shown that coffee shops comply with the conditions. However, some conditions (f.i. with regards to hard drugs or youngsters) have higher rates of compliance than others (f.i. the 5 and 500 gram rules). Control is not always easy, nor for the police nor for the coffee shop exploitant themselves (De Bruin et al., 2008).

Coffee shops are tolerated from the viewpoint that cannabis users should be kept away from the more dangerous markets of hard drugs. Users should be protected against marginalisation,

stigmatisation, criminalisation, and hard drugs. Adult cannabis users should have the possibility to buy and use their cannabis in a safe and quiet place where no hard drugs are present. The realisation of a division of the markets of hard and soft drugs is the intended function of coffee shops.

Municipalities can define their own policy with regards to the presence of coffee shops. Most municipalities do not tolerate any coffee shop within their borders ('zero policy', 66% in 2007). About one quarter does tolerate coffee shops. This number is relatively stable. These municipalities defined a certain maximum number. Sometimes, the real number exceeds the maximum, sometimes it is lower, but in most cases the intended maximum number is reached in reality. See table 11.1.

	2003		2004		2005		2007	
Policy:	Ν	%	Ν	%	Ν	%	Ν	%
No formal policy	35	7	34	7	42	9	45	10
Zero policy	335	69	340	70	314	67	288	66
Maximum policy	105	22	104	22	106	23	107	24
Cs>tolerated number	12	11	10	10	10	10	16	15
Cs <tolerated number<="" td=""><td>10</td><td>10</td><td>11</td><td>11</td><td>11</td><td>11</td><td>17</td><td>15</td></tolerated>	10	10	11	11	11	11	17	15
Cs=tolerated number	83	79	83	79	85	80	74	70
Other	12	2	5	1	5	1	3	1
Total	487	100	483	100	467	100	443	100

Table 11.1 Municipalities and their policy with regards to number of coffee shops, 2003-2007

I. Comparison of the period since 2003 and the period before is not possible due to changes in questionnaires. Source: Bieleman et al., 2008.

Most municipalities also have their own additional conditions for coffee shops, like: minimum distance from schools or from other coffee shops, opening hours etc.

If coffee shops do not comply with the rules, they can be sanctioned, whereby sanctions can run from a formal warning to definitive closure of the shop.

A field survey amongst almost 800 cannabis users in seven municipalities (five with and two without coffee shops) and expert interviews in ten municipalities in 2003 and 2004 showed that there are five categories of non-tolerated retail outlets (Korf et al., 2005):

- Dealers operating by means of mobile-phone
- · Home dealers, who sell drugs from their own home, partly from own cultivation
- · Self-growers, who give cannabis away or sell it
- Street dealers

• Under-the-counter dealers, who sell cannabis in a 'normal' catering place.

These dealers were found in both municipalities with and without coffee shops. Korf et al report that in municipalities with coffee shops, an estimated 70% of the cannabis is sold directly at a coffee shop. They also report that the more coffee shops there are the more cannabis is sold from coffee shops. In general, it is estimated that there are about ten non-tolerated retail outlets

per coffee shop, according to Korf et al. This would mean that there might be some thousands of non-tolerated retail outlets in The Netherlands.

A population survey in 2001 showed that most of the adult cannabis users (67%) buy their cannabis (sometimes or regularly) in a coffee shop (Abraham et al., 2002). The second important source of cannabis for them are friends, acquaintances or family members (53,4%). 5,4% grows cannabis themselves.

A survey amongst pupils of secondary schools shows that there are several places were younsters buy their cannabis (Monshouwer et al., 2008) (see table 11.2). The coffee shop is the place that is mentioned most often. This is even true for youngsters of 12-17 years: some of them, get their cannabis from friends who buy it in the coffee shop, others manage to enter a coffee shop themselves, even though it is forbidden. It concerns mainly boys that look older than they are in reality and who prefer coffee shops with a less strict control.

	,	
	12-17 years	18 years
I never buy cannabis	51,7	25,9
Coffee shop	27,5	73,0
At dealers' home	11,6	13,4
Someone else's' home	7,9	1,7
At or around school	8,0	1,7
Street, park etc.	12,6	7,9
Café	1,5	1,6
Discotheque	1,7	1,7
Tea- or coffee house	0,9	0,0
Community centre	1,5	1,6
Other	0,8	0,0

Table 11.2 Place where pupils of high schools (percentage according to last year use of cannabis, 12-18 years) get their cannabis*, 2007

* More than one answer possible. Data are representative for youngsters 12-16 years; in the group of 17-18 years two school types are overrepresented. Source: Monshouwer et al., 2008, secondary analyses.

The coffee shops have been subject to a stricter regime since the 1990s.

- The conditions were sharpened. The main changes were that the age of entrance was raised from 16 to 18 years and that the daily amount of sale to a client was decreased from 30 grams to 5 grams (in 1996).
- The number of coffee shops decreased since 1999 (Bieleman et al. 2008). In 2007, there are 702 coffee shops in 106 municipalities. See figure 11.1.
- In 2008 and 2009, coffee shops were closed. It is not known how many coffee shops have remained.

Figure 11.1 Number of coffee shops and number of municipalities with coffee shops in The Netherlands, 1999-2007



In general, it is not difficult to achieve cannabis, be it by buying it yourself or via others, via nontolerated retail outlets or coffee shops (Van Laar and Van Ooyen, 2009).

The chance that cannabis users get in contact with hard drugs is highest when they buy their cannabis from street dealers, dealers operating by means of mobile phone, or under-the-counter dealers (Korf et al., 2005). The chance is lowest at home dealers. Coffee shops adhere well to the rule that they may not have or sell hard drugs. This is reported in a study amongst 101 coffee shops in 54 municipalities and also in other studies carried out before (De Bruin et al., 2008). The chance that cannabis users get in contact with hard drugs in a coffee shop is low (Van Laar and Van Ooyen, 2009).

The presence of coffee shops in some cities near the southern and south-eastern border (Germany, Belgium) causes a lot of public nuisance by drug tourists. Some shops are very large and serve thousands of customers per week. They are more vulnerable to influences of organised crime. This is a substantial problem, which leads to drastic measures in some municipalities and experiments and new approaches in others. It is seen as an important problem that has to be solved in the near future (Adviescommissie drugsbeleid, 2009).

Another problem is the so-called 'back door problem' of the coffee shops. In order to supply their shop with cannabis, coffee shop owners have to violate the law: they must buy their cannabis on a wholesale market and transport it to their shop, which is not only an offence against the Opium Act, but which also carries the risk that they come into contact with criminal cooperatives.

Coffee shops contribute to the intended division of markets of hard and soft drugs. Most users buy their cannabis from a coffee shops, and coffee shops adhere well to the rule that they are not allowed to have any hard drugs present (Van Laar and Van Ooyen, 2009).

Cannabis, however, is also bought elsewhere, where there is a greater risk of mixture of markets. The question whether coffee shops hold users back from the use of hard drugs, cannot be answered without ambiguity. Other factors seem to play a more important role in the step from soft to hard drugs. The use of hard drugs in the Netherlands is relatively low compared to other countries in the EU and the USA, except for ecstasy. The role of coffee shops in the increasing use of cannabis until the mid-nineties is unclear. This increase also occurred in other countries. On the other hand, cannabis use amongst youngsters is relatively high compared to other European countries and the perceived risks of use are relatively low, although there seems to be no straightforward relationship between both variables (see chapter 2).

Conclusion

Coffee shops are the main retail outlets for cannabis, but there are other outlets as well. The separation of the markets of cannabis and hard drugs, which is at the core of the coffee shop system, is well realized in coffee shops, but not so much at other outlets and certainly not at the level of criminal cooperatives.

11.2 Seizures

11.2.1 Legislation

In 1976, the Opium Act was changed: a difference was made between 'drugs with an unacceptable risk' ('hard drugs' like heroin and cocaine, listed on a list I which is an appendix of the Opium Act) and 'drugs which carry less risks' ('soft drugs', mainly cannabis, listed on a list II in the appendix). The law enforcement approaches and the maximum sanctions for both categories differed. These differences still exist, but they became smaller because the sanctions for some soft drug offences became more severe. See table 11.3. In 2006, there was a last major amendment. A paragraph 5 was added to section 11, which concerns the sanction for criminal acts involving large amounts of soft drugs. The maximum now is six years of imprisonment (or a proportionate fine). This amendment had to be made as a consequence of the 2004-EU Framework Decision on Drugs (*Kaderbesluit Drugs*). 'Large amounts' are defined as 500 grams of cannabis, 200 plants of cannabis or 500 units of any other drug listed as a soft drug (Stb 2006/416).

Offence:	Max sanction 1995:	Max sanction 2009:
List I (hard drugs)		
Possession/trafficking/cultivation/dealing	6 month / 4 th cat. ^{II}	ldem.
Possession - intentional	4 yr / 5 th cat.	6 yr / 5 th cat.
Cultivation - intentional	8 yr / 5 th cat.	ldem.
Trafficking - intentional	12 yr / 5 th cat.	ldem.
Small amount for own use	1 yr. / 3 rd cat.	ldem.
Abet of/preparation of trafficking/cultivation	6 yr / 5 th cat.	ldem.
List II (soft drugs)		
Possession/trafficking/cultivation/dealing ¹	1 month/ 2 nd cat.	ldem.
Possession/cultivation – intentional and >30 gr.	2 yr / 4 th cat.	ldem.
Cultivation - professional	-	6 yr / 5 th cat.
Trafficking – intentional and amounts not for own use	4 yr / 5 th cat.	ldem.
Possession/trafficking/cultivation large amounts	-	6 yr / 5 th cat.
List I & II		
Advertising/false recipes	6 month/ 4 th cat.	ldem.
Advertising/false recipes - intentional	4 yr / 5 th cat.	ldem.
Participation in organisation aimed at		
dealing/cultivation/trafficking	-	8 yr / 5 th cat.

Table 11.3Maximum sanctions for hard and soft drugs in the Opium Act, situationin 1995 and in 2009

I. Intentional behaviour not proven. II. Cat = Category of fine. Source: Opium Act 1995 en 2009.

11.2.2 Supply reduction activities

Since the seventies, the policy with regards to cannabis is differentiated: users are left out of the criminal system, small-scale possession and cultivation is tolerated, as is the sale of cannabis from officially tolerated coffee shops, but large-scale cultivation, trafficking and dealing should be tackled by law enforcement organisations. However, law enforcement with regards to cannabis did not have priority for a long time. The involvement of organised crime was already signalled in the nineties (Ministerie van VWS, 1995). In 1995, measures to enforce the law in a more stringent way were announced, especially with regards to large-scale cultivation of cannabis.

Bovenkerk and Hogewind, however, showed in 2003 that the investigation and prosecution of the cultivation of cannabis was weak. A report of the National Audit office confirmed that the cultivation and trafficking of cannabis had gotten low enforcement priority for a long time before 2003 (Bovenkerk and Hogewind, 2003; TK 30050-1/2, 2006). According to the Advisory Committee for the drug policy (Adviescommissie Drugsbeleid, 2009), the professionalisation of the cannabis cultivation also took place because law enforcement was weak. This changed in the last years:

• In April 2004 an intensification of law enforcement on cannabis cultivation was launched in a policy paper (T.K.24077, nr. 125, 2004). The reasons were signals of increasing large-scale

and professional cultivation in The Netherlands and of involvement of organised crime. This program is still running. Enforcement aims at individual plantation sites and at criminal cooperatives. The judicial instruments used are broad and are based on administrative and criminal law. Public as well as private parties are involved in co-operation.

- The approach was strengthened in 2006 (T.K.24077, nr. 184, 2006).
- In December 2007, the Minister of Justice launched a program called 'Strengthening of approaches against organized crime' (T.K.29911/10). The approaches contain a combination of administrative and preventive measures, criminal justice and repressive approaches and international co-operation. Police, judicial institutions, public government and private parties are involved. There is a close link with activities against money laundering and other financial-economic crime.
- In July 2008, the Ministries of Justice and of the Interior installed the 'Task Force Organised Cannabis Cultivation', which is led by the Public Prosecutor (Stc 2008-171, p. 10).
- The new approaches are tried out in a number of pilots. These pilots will be monitored by the Task Force.
- In November 2008, the increased involvement of organised crime in cannabis cultivation has led to a stronger approach against these organisations. Law enforcement efforts against these organisations are defined as one of the priorities in the fight against organised crime in The Netherlands in the period 2008-2012 (Boerman et al., 2008; T.K.29911/17). Expertise in financial investigation is strengthened.
- The Advisory Committee for the drug policy concludes that law enforcement of the cultivation of cannabis should be vigorous, especially because of the high level of involvement of criminal cooperatives (Adviescommissie drugsbeleid, 2009).
- Grow shops can be tackled by local authorities. They can and do use existing judicial options to differentiate between mala fide and bona fide grow shops. If sale of cannabis is discovered, prosecution can follow on the basis of the Opium Act (www.ccv.nl).
- The legal possibilities to tackle non-tolerated retail selling points were broadened.
- The drug tourism caused by coffee shops in some border regions is tackled in different local ways. Some municipalities closes all coffee shops, others try to exclude foreign customers by introducing a pass system which limits entrance to coffee shops, or displace their coffee shops from the city centre to areas at the city borders (Van Laar and Van Ooyen, 2009).

All in all, there are intensified and coordinated law enforcement activities, which target the production and trafficking of cannabis and which use a combination of different approaches, applying criminal justice as well as administrative judicial instruments and financial investigations. Non-tolerated retail selling points and drug tourism are also tackled more vigorously, especially in cities in border regions.

11.2.3 Seizures of plantations

In 2005 and 2006 about 6,000 plantations were dismantled (Dienst Nationale Recherche Informatie 2007; Wouters et al., 2007).⁸ In 2007 it was about 5,200 and in 2008 4,700 (KLPD, 2009). According to these figures – which were validated by Wouters in 2007 - there was a decrease.

⁸ Figures from 2004 and before are not reported because lack of validity (Van Laar et al., 2005)

Jacobs (2007) did research into files of cannabis offences. He reports that the number of plants that were seized per plantation varied from 3 to 5,460, with a mean of 474 plants per plantation. Other seizure data cannot be reported because of a lack of validity.

11.3 Offences

Cultivation, trafficking and possession of cannabis are defined as offences in the Opium Act. Cultivation and possession of cannabis is, however, not prosecuted if it concerns small amounts for own use. These 'small amounts' are specified in prosecution protocols: not over five grams or five plants of cannabis. Selling cannabis is also a criminal act, but as long as this is done by socalled coffee shops which have to adhere to certain rules, this will not be prosecuted. Dealing of cannabis outside these coffee shops is prosecuted.

Data from judicial authorities should be seen in the context of these definitions.

Databases from the National Police and the Public Prosecutor show that:

- The percentage of (running and closed) criminal investigations into more serious forms of organised crime that (also) concern cannabis lies between 60 and 65%⁹. This is shown in figures on investigations into organised crime from the police (table 11.4). The police make an annual inventory for Europol, in the framework of European Organised Crime Threat Assessment ('OCTA'). In 2008, it was 65%. In about one quarter of the cases it concerned only soft drugs/cannabis. Relatively often the criminal cooperatives cultivate of traffic both hard and soft drugs combined. No clear trend up or down can be observed in the last years.
- The investigations into soft drugs concern mostly trafficking or cultivation of 'nederwiet' (75% in 2007; a total of 118 investigations) or else the trafficking of hashish (25% in 2007; 40 investigations) (not in table).

⁹ Years 2006-2008 are comparable
Table 11.4:Investigations into more serious forms of organized crime, percentage of drug
cases, and type of drug involved, 2004-2008¹

	2004	(II)	2005	(III)	2006	2007	2008
Total number of investigations:	289		176		333	328	352
Targeting drugs	69%		72%		75%	72%	70%
Investigations targeting drugs:	200		127		250	235	247
- cases with hard drugs	84%		85%		79%	83%	76%
- cases with soft drugs	27%		41%		60%	67%	65%
- only hard drugs	69%		59%		40%	36%	35%
- only soft drugs	11%		15%		21%	20%	24%
- hard- and soft drugs	16%		26%		39%	47%	41%

I. Investigations may involve trafficking or cultivation of several drug types, therefore the numbers in the table categories cannot be added up. II. Data from 2005 concern only the period January-November. III. In 2006 a larger scope of selection was implemented; as a consequence the number of investigations is substantially higher than in the years before; in particular the number of soft drugs trafficking investigations is concerned; therefore the 2006 data can not be compared to the data of the years before. Source: KLPD-DNRI, 2009.

- The number of police arrestees for cannabis offences increased between 2004 and 2007¹⁰ from 7,437 to 7,870 cases. The cases with cannabis and hard drugs combined also showed an increase, from 2,106 to 2,804. Between 2004 and 2000, there was a large increase. Since 2004, the increase was less significant.
- Between 2004 and 2008, the number of cannabis offences (where no hard drugs were involved) registered at the Public Prosecutor varied. There was an increase between 2004 and 2006, and then a decrease in 2007 and 2008. The total number in 2008 was almost 9,000 cases. The majority concerns production and trafficking of cannabis. Cannabis cases more than doubled between 2000 and 2006 (from almost 4,600 to more than 9,500).
- 57% of the soft drug cases are brought before court in 2008. This is a lower percentage than in 2004-2007. 31% get a transaction from the Public Prosecutor.
- Cannabis offenders are only a very small proportion of the prison sentences (Van Laar et al., 2007; Van Ooyen et al., 2009). Most of these offences are sanctioned with a community service order.

It should be noted that figures from registrations always depend for a certain part on the activities and priorities of law enforcement agencies as well as completeness of the registrations. Also, databases are often adapted and improved in the course of time. Later versions may differ from former ones. We have to deal with 'living systems'. Figures and trends should therefore be interpreted carefully.

¹⁰ No 2008 data available

Conclusion

In general, this paragraph showed that the proportion of cannabis offences shows an increasing trend over the period 2000-2008. A majority of 57% is brought before court and most of these are sanctioned with a community service order.

11.4 New developments

A new drug strategy is in development (see also chapter 1). The Advisory Committee for this new strategy concludes that the nuisance, the drug tourism and the large scale of some coffee shops in border areas and growing involvement of organised crime related to cannabis cultivation and exportation are major and urgent problems that need a solution (Adviescommissie Drugsbeleid, 2009). Solutions are sought in:

- A combination of administrative and criminal justice interventions and a more powerful law enforcement;
- A re-organisation of the coffee shop sector, aiming at small scale coffee shops for local markets for adult customers; within this framework, there should be room for experiments which aim at curtailment of the supply via coffee shops.
- A more directive attitude of the national government.

In addition the government plans to review the classification system used in the Opium Act (Hoofdlijnenbrief, 2009). Since 2009, a combined approach against criminal cooperatives involved in production and trafficking of cannabis is piloted. The pilot is conducted under supervision of a special Task Force and will be followed in research.

12 Problem amphetamine and methamphetamine use, related consequences and response

In the Netherlands neither perceived nor measured problems related to amphetamine or methamphetamine use were and are considered extensive, when compared with problems related to the use of other hard drugs. In contrast to some other European countries, amphetamine never became a major substance in the scene of problematic drug users. Nowadays, its use remains limited to subpopulations in which the drug is used for recreational purposes. Regular amphetamine use was and is restricted to small networks or user groups. Consequently, Dutch research on this topic is limited and the available data on (meth)amphetamine use is relatively scarce. However, the number of amphetamine users seeking treatment increased in the past years, which may reflect an increased popularity in some populations.

12.1 Epidemiology of amphetamine and methamphetamine use with emphasis on chronic/intensive use

12.1.1 History of (meth)amphetamine use

The research done in the past that (also) reported about (meth)amphetamine in the Netherlands, is scarce, often narrative and conducted with qualitative or mixed methodologies. The available data are mainly restricted to specific cities (Amsterdam and Utrecht) or scenes and less reliable. National prevalence data of amphetamine use (not methamphetamine use) became available from the mid nineties.

Older studies give an impression of amphetamine use in earlier decades and point to consumption for recreational purposes. This consumption largely remained restricted to relatively small subgroups (see below). An older study commissioned by the EMCDDA confirms these observations, and reports that drug policy measures specifically pointing at (meth)amphetamine problems are unknown in our country. We know of no publications that give reliable information about chronic or intensive use of these drugs. In contrast, the amphetamine type stimulant ecstasy became very popular in the nineties. Therefore, ecstasy and other drugs gained most attention in nation-wide educational campaigns while (meth)amphetamine had no priority in response activities, because these drugs were rarely used (Lewis and Sherval, 1997).

An ethnographic study on problematic users of heroin and other hard drugs in the city of Utrecht suggests that from 1962 amphetamine, methamphetamine but also heroine and LSD were used in specific drug scenes (Verbraeck, 1984). These small groups of (often) heavy users probably also existed in other big cities, especially during the "roaring sixties".

In 1976 the Amphetamine Decree (*Amfetaminebesluit*) was launched, putting this drug and methamphetamine under the Opium Act as an illegal drug. Before, amphetamine was considered and sold as a medicine. After that year amphetamine was produced more and more in illegal laboratories that were mainly situated outside Amsterdam. After the coming into force of this decree, methamphetamine users in the city of Utrecht and Amsterdam turned to heroin (Verbraeck, 1984).

The results of another study showed that in those years amphetamine did not cause serious societal problems and that already for years it had not been a priority in the Amsterdam drugs combat activities (Korf and Verbraeck, 1993). The number of amphetamine users in the general population and school population remained relatively small, but there are indications that in the past years their popularity has increased in some subpopulations (Van Laar et al., 2008; 2009).

12.1.2 Trends and patterns of (meth)amphetamine use

In the Netherlands, amphetamine is used both in specific recreational settings and in small problematic drug scenes. Recreational amphetamine users in Amsterdam most frequently report to follow the pattern of a rise in use over time until a peak has been reached and reducing use afterwards or stopping altogether after a few years. Qualitative data among young people and market data suggest that methamphetamine use is very rare in the Netherlands (Nabben et al., 2000; 2007), but prevalence data on methamphetamine use is virtually absent (Van Laar et al., 2009).

National figures on the use of amphetamines

Lifetime prevalence of amphetamine use among the general population remained fairly stable from 1997 to 2005, namely between 2.0 and 2.3%, showing that a small proportion of the general population has ever used amphetamine. Last year prevalence in the same period oscillated between 0.35 and 0.4% and last month amphetamine use between <0.01% and 0.2%. The National Prevalence Study of 2005 estimated there were some 21,000 current amphetamine users in our country (Rodenburg et al., 2007). In reality the number may be higher due to underrepresentation of hidden problem users in this type of surveys. Specific population data on methamphetamine use do not exist but the figures for use of this drug are most probably much smaller (Ouwehand et al., 2009; Van Laar et al., 2009; Van Dijk, 2009).

The European School Survey Project on Alcohol and other Drugs (ESPAD) presents data on lifetime amphetamine use among 15-16 year old students in European Member States. In 1999, 2003 and 2007 these figures were 2, 1 and 2% respectively for the Netherlands (Hibell et al., 2000; 2004; 2009). Between 2001 and 2005, last month prevalence of amphetamine use remained well below one percent.

The Dutch National School Survey on Substance Use (*Peilstationsonderzoek*) among school pupils (10-18 years of age) revealed that lifetime amphetamine use increased among Dutch secondary school pupils from around 2.2% in 1992 to 5.3% in 1996, but then decreased to 2.8% in 1999 to (again) 2.2% in 2007. Last month prevalence data over these years were 0.6%, 1.9%, 1.1% and 0.8% respectively (Monshouwer et al., 2008; Van Laar et al., 2009). Lifetime use of amphetamines is much more common among pupils from some special schools (Rec-4 schools) and among youth in residential youth health care (§ 2.2 and 2.3).

The prevalence data may differ between regions. Older quantitative survey data from the National Drug Prevalence study conducted by CEDRO in 1997 and 2002 showed that lifetime

prevalence of amphetamine use in Amsterdam was about three times as high compared to the Dutch average (Abraham et al., 1999; 2002).

Recreational patterns of (meth)amphetamine use

The Antenna studies among young people in Amsterdam are using both qualitative data from panels of key informants in diverse nightlife settings as well as quantitative data on drug use. The last study (Benschop et al., 2009) reported that the last month prevalence of amphetamine use among visitors of clubs peaked in 1998 (13%) and decreased afterwards to a lower use level than that in 1995 (6% in 2008). Contrary to former decades in Amsterdam, amphetamine is nowadays almost never used in public recreational settings (clubs and bars). Instead, it is said to be more often used during after parties, e.g. when cocaine is not available anymore. Regular users are most often part of small networks of drug users (Benschop et al., 2009). In 2008, the average age of first use of amphetamine among visitors of clubs was 20.3 years (SD±4.3 yrs). Current use was highest among men (9% against 4% for women) and among western people against non-western people (7% against 1%).

Findings from other (qualitative) studies suggest that, although amphetamine use is much lower than that of cocaine and ecstasy, it have since years been rather stable in specific recreational drug users and drug scenes (e.g. underground, rock, punk, techno, hard style), but also in some less populated regions. In recreational settings the image of this drug is in general negative, consequently amphetamines are unpopular. Amphetamine is considered to be used by "losers" who cannot afford good quality drugs. Nevertheless, the drug is cheap (average price per gram is around \in 7,50), thus more attractive for those who cannot afford expensive drugs. The popularity of amphetamine is growing among young people living in the country (the "farmer's coke") or in smaller cities, probably because they consider it a good alternative for the expensive fashionable stuff (cocaine) and it has similar effects. It may be attractive for this group that this drug is also perceived to neutralise the effects of alcohol use. Some say that even the boring village they live in, is getting more exciting with this type of 'speed'. An important observation is that members of urban artistic scenes perceive it as a straightforward substance that allows one to continue (re)creational activities with new energy (Nabben et al., 2007; De Jong et al., 2008; Benschop et al., 2009).

Methamphetamine use

Qualitative data also indicate that, because of its more potent (and probably more harmful) effects, methamphetamine is even less popular than amphetamine. The interest of methamphetamine use may be growing somewhat in specific scenes, e.g. men who have sex with men and "psychonauts" who experiment frequently with hallucinogenic substances and other drugs (Nabben et al., 2000; 2007). In 2008, 2.8% of the visitors of clubs had ever used methamphetamine and 0.5% was a current (last month) user (Benschop, 2009). A recent internet survey among 4,796 students in higher vocational education and university students revealed a lifetime prevalence of methamphetamine use of 0.43% (Zandt, 2009).

Amphetamine use patterns

The survey in 2008 among visitors of clubs in Amsterdam (see previous paragraphs) showed that most of the current amphetamine users consumed this drug only occasionally (45%) or sel-

dom (46%); 6% used amphetamine on a few days during the working week or only during the weekend (Benschop, 2009). About three quarters (78%) of the last year users had combined amphetamine with alcohol (concurrently or successively). Four percent of the respondents had used amphetamine during the night out, of which one-third had used at least ¼ gram of amphetamine.

Another (quantitative) study among 109 participant amphetamine users in (again) Amsterdam, reported that "(...) from a longer-term perspective, decreasing levels of use and/or abstinence are the norm for the large majority of the respondents." (Uitermark and Cohen, 2006, p.192). The study also showed that use patterns vary considerably over time between low (0-2,5 gram per month), medium (2,5-10 gram per month) to high (>10 gram per month). In this study the age group 18-25 years is over-represented. Older amphetamine users are almost absent in the study sample (due to snowball sampling). More than 90% of them (61) were interviewed between two and three years after the first interview. Retrospective self-reported use covered at least three years and in most cases five years.

During the interviews six models of amphetamine use were presented. Most respondents (45 or 41.3%) chose for the "up-top-down"-use model as fitting their way of use. Their use had gradually increased over time but after a peak, a reduction was set in. A second (less frequent category (32 or 29.4%) said they used variably over time. For some others (15 or 13.8%) the use was considered continuous over the years. The up-top-down model was even more common during the second interview. The average period of heaviest use lasted 14 months which is shorter than for other hard drugs. On average, most respondents in the second interview had not intensified their amphetamine use. A majority of them reduced their level of used or stopped using amphetamines altogether (Uitermark and Cohen, 2006).

12.1.3 Prevalence estimates of problem (meth)amphetamine users

The number of problematic (meth)amphetamine users in the Netherlands is unknown. Problematic amphetamine users are most probably hidden in small drug scenes that are not covered by surveys.

We only have figures from the LADIS registration system (see 5.3) of amphetamine users that seek help in regular addiction care settings (Van Laar et al., 2009). However, these treatment entrance data might at best give in indirect indication in trends of problem use, but they do not give us a complete picture of the size of the group of problematic amphetamine users (see 12.1.4).

Finally, data from the Amsterdam Cohort Study (ACS) cover problematic drug users, including amphetamine users. An analysis on these data showed that, compared with other drugs, problematic amphetamine use is rare. Apart from heroin, methadone, and cocaine, amphetamines were used by 85 out of the total of 899 participants, with 75 using a combination of heroin, co-caine and amphetamines and 10 using amphetamines only (Termorshuizen et al., 2005).

12.1.4 Treatment demand for (meth)amphetamine use

Since 2000 there has been a steady increase in treatment demand at addiction care institutes due to problems with amphetamines use (figure 12.1). However, these figures are still quite low compared with those for other drugs: the proportion of amphetamine clients among all drug clients varied between 2 and 4% in all registration years. In 2007 some 6% of the estimated 21,000 current amphetamines users (based on general population data for 2005) was in treatment. The number of clients reporting amphetamines as their secondary problem drug also slightly increased in the past years.





Source: LADIS, SIVZ (Ouwehand et al., 2009).

Poly drug use among amphetamine clients is most frequently reported. In 2007 81% clients had a secondary substance use problem, with cannabis (30%), alcohol (16%), cocaine (12%) and ecstasy (12%) being mentioned most frequently. In 2007, a quarter (24%) of the primary amphetamines clients was female. The average age was 28 years. Figure 12.2 shows a shift from younger to slightly older age groups among amphetamine clients between 1998 and 2007.



Figure 12.2: Age distribution of clients with primary amphetamine problems

Source: LADIS, SIVZ (Ouwehand et al., 2009).

In 2006, the number of admissions of *general hospitals* for patients with a primary or secondary diagnosis of problems with amphetamine(-like substances) equalled 119 persons.

The Amsterdam Municipal Health Service keeps a record of non-fatal emergencies brought to its attention (Central Post for Ambulance Transports). Between 2000 and 2008 the numbers varied between three and seventeen, with the exception of 2000 with 30 transportation requests. In 2008 amphetamines incidents made up only 1% of all recorded drug incidents (see also § 6.2).

A regional organisation of addiction care (Brijder) has initiated a national telephonic medical office-hour for party drugs (ecstasy, amphetamine and GHB) at three locations in the western part of the country. Specialists in synthetic drugs give information on health risks and offer help in case of persistent complaints after using these drugs. There were no mono-amphetamine users among the patients. Examples of frequent complaints due to synthetic drugs are mood disorders (depression or anxiety), reduced concentration, fatigue or muscle contractions. The costs are reimbursed by health insurance companies. General Practitioners can also ask these specialists for advice (www.brijder.nl) (G. Alderliefste, personal communication).

There are no Dutch studies that further explore the population treated for amphetamine problems. Studies that compare primary (meth)amphetamine users with other drug users are also absent.

12.1.5 Out-of-treatment populations of (problem) (meth)amphetamine users

No information available.

12.1.6 Production sites and laboratories, origin of products and trafficking routes, precursors, seizures

The Netherlands is a production country for synthetic drugs. In 2009 an illegal laboratory for the production of amphetamine had been dismantled. In the laboratory 480 kilograms of solid BMK (BMK-bisulfite), a precursor for amphetamine production, was also discovered (Nationaal Netwerk Drugsexpertise, 2009a) (Nationaal Netwerk Drugsexpertise 2009b). Production sites seem to be mainly situated in a Southern department of our country. It is suggested that Dutch experts are cooperating with amphetamine production networks in Belgium, Poland, and the Baltic States (Boerman et al., 2008). Publications with reliable data on the origin of precursors and trafficking routes are not available.

The number of seized amphetamine tablets fluctuated in the past years; the amount of seized powder is always greater than the amount of tablets. In 2008, 1,112 kg of amphetamine was seized. The amount of methamphetamine seized in 2008 was 20 grams, while in 2007 9.8 kilograms of meth-powder were seized (KPLD-IPOL, 2009). The figures probably represent an underestimation due to low quality and incompleteness of the registration. Trend data cannot be determined.

12.2 Overview of health and social correlates of chronic amphetamine and methamphetamine use

Availability

The perceived availability of amphetamine among 15 to 16 year old students increased between 2003 and 2007. In 2003 and 2007, amphetamine was "fairly easy" to "very easy" to buy for 11% and 20%, respectively, for male students and 5% and 14 %, respectively, of the female students (ESPAD, 2003; 2007). In general, the availability of amphetamine is considered to be good, except in Amsterdam, probably because few dealers are active (less profits) with this drug (Nabben et al., 2007; Benschop et al., 2009).

Amphetamines: decreasing purity

Since 1992 the Drug Information and Monitoring System (DIMS) monitors the contents of drug samples that are forwarded by consumers to drug prevention units of addiction care (see § 3.2 and § 10.3). According to DIMS the purity of amphetamine offered on the drug market has been stable for many years. However, as for ecstasy, recent changes have also been observed on the speed market.

- In 2008, 894 powder samples sold as speed were analysed in the laboratory, which is a substantial increase to previous years (551 in 2005, 553 in 2006 and 770 in 2007). This trend seems to continue, as in the first half of 2009 613 speed powders were delivered to DIMS.
- In 2008 the majority (95%) of the speed powders contained amphetamine, with an average concentration of 26%, against 34% in 2007. However, a decreasing trend was seen during the course of 2008, with concentrations of on average 35% in the beginning of 2008 and

16% at the end of 2008 (see figure 10.2). In the first half of 2009 the purity of speed seems to 'recover' (24% on average).

- In 2008 the large majority (80%) of the samples contained caffeine, to compensate for the reduced amphetamine concentration. Figure 12.3 shows the reverse trends for amphetamine and caffeine.
- These changes might have been due to a shortage of the precursor BMK.
- The amount of powders containing methamphetamine remained low: in 2008 0.6% contained only amphetamine and 0.3% contained both amphetamine and methamphetamine.
- Amphetamines are to a small extent also found in pills that were sold as ecstasy. In 2008 this was the case for 1.6% of the tested pills.

Figure 12.3: Monthly trend in the concentration of amphetamine and caffeine in speed samples in 2008 and the 1st half of 2009



Source: DIMS, Trimbos Institute.

Amphetamine deaths

The Causes of Death Statistics do not allow a specification of amphetamine related deaths. However, in the past years between 2 and 5 cases of death due to stimulants were recorded (T43.6). These cases might involve the use of MDMA and amphetamines but also qat, ephedrine, and caffeine, and others. Nonetheless, these data suggest that the frequency of amphetamine deaths is fairly low.

A forensic study reviewed post-mortem cases of suspected unnatural deaths involving use of amphetamine-type stimulants by comparing the respective blood concentrations with those from non-fatal cases of driving under the influence (DUI cases) and with literature (Verschraagen et

al., 2007). In this study, data from 1999 to 2004 from the archives of the Netherlands Forensic Institute were used. In total 70 post-mortem cases were analysed and compared with 467 DUI cases. The most detected amphetamine-based drug was MDMA, followed by amphetamine. Methamphetamine was rarely present. Three categories were discerned: drug-caused deaths (death directly caused by overdose), drug-related deaths (death indirectly caused by taking the drug) and the control group, namely DUI cases (non-fatal cases). The results showed that 7 victims directly died from amphetamine, with blood concentrations ranging from 0.24-11.3 mg/l (media 1.7 mg/l). The median concentrations of amphetamine in cases of *drug-related* deaths (n=13) and drivers (n=208) were much lower (0.28 and 0.22 mg/l). Ninety percent of the amphetamine blood concentrations in the *drug caused* cases were higher than 0.8 mg/l, against 16% in amphetamine *drug-related* deaths and 7% in the DUI cases. Because concentrations in the latter two groups overlap the range of fatal concentrations, the authors advised to establish the cause of death only on the basis of a *combination* of data, including the results of toxicological tests, circumstances of death and the complete autopsy results.

12.3 Responses to chronic amphetamine and methamphetamine use

12.3.1 Health, social and legal responses addressing (meth)amphetamine use or chronic use

There are no prevention or treatment programs specially meant for (meth)amphetamine users in the Netherlands, neither are there harm reduction interventions for this target group or specific legal responses (cf. the medical office hour in § 12.1.5).

12.3.2 Quality assurance and best practices

There are no guidelines, quality assurance mechanisms and best practices regarding cure and care of (meth)amphetamine users in the Netherlands.

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13.2 Alphabetic list of relevant data bases

Amsterdamse cohortstudie, Amsterdam Cohort Study Local cohort study on mortality among methadone clients registered at the CMR (see below), conducted by the Municipal Health Service Amsterdam. Homepage: www.ggd.amsterdam.nl

Antenne (Amsterdam Antenna)

Local monitor of the use of alcohol, tobacco, and drugs by school-goers and socialising young people in Amsterdam, conducted by the Bonger Institute of the University of Amsterdam (UvA). Homepages: www.jur.uva.nl & www.jellinek.nl

Causes of death statistics

National registration of causes of death, that is the Dutch General Mortality Register (GMR), including deaths due to drugs, conducted by Statistics Netherlands (CBS). Homepage: www.cbs.nl

CBS Politiestatistiek, Statistics Netherlands (CBS) Police Statistics National registration of the number of police reports on offences against the Opium Act, conducted by Statistics Netherlands (CBS). Homepage: www.cbs.nl

Cliënt Volg Systeem Amsterdam, Client Monitoring System, Amsterdam Local registration system of treatment given by the Municipal Health Service, Addiction Care, and Public Mental Health Care, including treatment for drug users. Homepage: www.ggd.amsterdam.nl

Cliënt Volg Systeem van Stichting Verslavingsreclassering Nederland, Client Monitoring System of the Foundation of Addiction Probation Services National registration of probation services offered to drug using offenders, conducted by the Foundation of Addiction Probation Services. Homepage: www.ggznederland.nl

CMR, Centrale Methadon Registratie, Central Methadone Register (CMR) Local registration of methadone substitution treatment, conducted by the Municipal Health Service Amsterdam. Homepage: www.ggd.amsterdam.nl

CPA, Centrale Post Ambulancevervoer, Central Post for Ambulance Transports (CPA) Local registration of ambulance transports, including transport due to problem use of alcohol and drugs, conducted by the Municipal Health Service Amsterdam. Homepage: www.ggd.amsterdam.nl

DIMS, Bureau Drugs Informatie en Monitoring Systeem, Drugs Information and Monitoring System (DIMS)

National survey on the contents of synthetic drugs, conducted by the Bureau of the Drugs Information and Monitoring System (DIMS) at the Trimbos Institute. Homepage: www.trimbos.nl

DMS, Drug Monitoring Systeem, Drug Monitoring System (DMS)

Local monitor on problem drug use and living conditions of marginalised hard drug users in the cities of Rotterdam and Utrecht, and the region of Parkstad Limburg, conducted by the Addiction Research Institute Rotterdam (IVO). Homepage: www.ivo.nl

Educare monitor

National monitor on first aid given at house parties, including first aid for problem alcohol and drug use, conducted by Educare Ambulant, Foundation of Nursing & Education Consultancy. Homepage: www.educaregroningen.nl

Haags Uitgaansonderzoek

Local monitor on the use of alcohol and drugs by young people in the nightlife scene (16-35 years) in The Hague, conducted by the Research Committee on Monitoring & Registration (MORE). Homepage: www.denhaag.nl/

HBSC, Health Behaviour in School-Aged Children

National monitor on the physical and mental health and well-being of school-aged children, including high-risk use of cannabis, conducted by the Trimbos Institute, Radboud University Nijmegen, and Utrecht University. Homepages: www.trimbos.nl & www.hbsc.org

HIV/aids-registratie, HIV/AIDS Registration

National reporting system for diagnoses of HIV and AIDS assessed by doctors, including HIV and AIDS due to injecting drug use, conducted by the HIV Monitoring Foundation (SHM). Home-page: www.hiv-monitoring.nl

HIV-surveillance among drug users

Local surveys in different cities of HIV-infection among injecting drug users, conducted by the National Institute of Public Health and the Environment (RIVM) and the municipal health services. Homepage: www.rivm.nl

Inbeslagnames drugs, Drug Seizures

National registration of drug seizures, conducted by the Research and Analysis Group of the National Criminal Intelligence Service of the National Police Agency (O&A/dNRI/KLPD). Home-page: www.politie.nl/KLPD/

LADIS, Landelijk Alcohol en Drugs Informatie Systeem, National Alcohol and Drugs Information System (LADIS)

National registration system of addiction care and treatment, conducted by the Organization Care Information Systems (IVZ). Homepage: www.sivz.nl

Landelijke Jeugdmonitor CBS-SCP (POLS), National Youth Monitor CBS-SCP (POLS) National monitor on the living conditions of young persons (12-29 years), including drug use, conducted by Statistics Netherlands (CBS) and the Social and Cultural Planning Office of the Netherlands (SCP). Homepage: www.cbs.nl LIS, Letsel Informatie Systeem, Injury Information System (LIS)

National survey on injuries treated at emergency departments of hospitals, including injuries due to alcohol and drugs, conducted by the Consumer Safety Institute. Homepage: www.veiligheid.nl

LMR, Landelijke Medische Registratie, Dutch Hospital Registration (LMR) National registration of admissions to hospitals, including admissions due to problem alcohol and drug use, conducted by Prismant. Homepage: www.prismant.nl

Monitor gedoogde coffeeshops, Monitor of tolerated coffeeshops National monitor of the number of coffeeshops that are officially tolerated by the local municipal policy, conducted by Bureau Intraval. Homepage: www.intraval.nl/

Monitor veelplegers (ISD), Monitor prolific offenders (ISD)

National registration of suspects and convicts who repeat the offence, including offences against the Opium Act, conducted by the Research and Documentation Centre (WODC) of the Ministry of Justice. Homepage: www.wodc.nl/

National Security Monitor, Veiligheidsmonitor Rijk (VMR)

National monitor on the experiences of citizens with crime and security and their opinion about police action, conducted by the Ministry of the Interior and Kingdom Relations (BZK). Home-page: www.minbzk.nl/

NEMESIS II, Netherlands Mental Health Survey and Incidence Study Second national cohort study on the general population (16-64 years) focussing on mental disorders including the abuse of and dependence on alcohol and drugs, conducted by the Trimbos Institute. Homepage: www.trimbos.nl

NL.Trendwatch

National qualitative panel monitor on the use of alcohol and drugs by young people in the nightlife scene, conducted by the Bonger Institute of the University of Amsterdam (UvA). Homepage: www.jur.uva.nl/criminologie

NPO, Nationaal Prevalentie Onderzoek, National Prevalence Survey (NPO) National survey on the use of alcohol and drugs in the general population aged 12 years and older, conducted by the Addiction Research Institute Rotterdam (IVO). Homepage: www.ivo.nl

NVIC Monitor, Nationaal Vergiftigingen Informatie Centrum, National Poisons Information Centre (NVIC)

National registration of information requests for poisonings, conducted by the National Institute of Public Health and the Environment (RIVM). Homepage: www.rivm.nl

OBJD, Onderzoeks- en Beleidsdatabase Justitiële Documentatie, Research and Policy Database Judicial Documentation (OBJD)

National registration of criminal cases registered at the Public Prosecutions Department (OM), including offences against the Opium Act, conducted by the Research and Documentation Centre (WODC) of the Ministry of Justice. Homepage: www.wodc.nl/

OCTA, Organised Crime Threat Assessment

National survey on organised crime, including offences against the Opium Act, conducted by the Research and Analysis Group of the National Criminal Intelligence Service of the National Police Agency (O&A/dNRI/KLPD). Homepage: www.politie.nl/KLPD/

OGGZ Monitor Amsterdam, Public Mental Health Care Monitor Amsterdam Local monitor on marginalized inhabitants of Amsterdam including problem drug users, conducted by the Municipal Health Service Amsterdam (GGD Amsterdam). Homepage: www.ggd.amsterdam.nl

OMDATA, Openbaar Ministerie Data, Public Prosecutions Department Data (OMDATA) National registration of criminal cases registered at the district courts, including offences against the Opium Act, conducted by the Office of the Public Prosecutions Department. Homepage: www.wodc.nl/

Peilstationsonderzoek scholieren, Dutch National School Survey (sentinel stations) National survey on alcohol and drug use among pupils (10-18 years), conducted by the Trimbos Institute and the Municipal Health Services. Homepage: www.trimbos.nl

Police Records System (HKS)

National identification system for the police, including drug use of suspects, conducted by the Research and Analysis Group of the National Criminal Intelligence Service of the National Police Agency (O&A/dNRI/KLPD). Homepage: www.wodc.nl/

THC-monitor

National monitor on the concentration of THC in cannabis products sold in coffeeshops, conducted by the Bureau of the Drugs Information and Monitoring System (DIMS) at the Trimbos Institute. Homepage: www.trimbos.nl

TULP/GW, Ten UitvoerLegging van vrijheidsbenemende straffen en maatregelen in Penitentiaire inrichtingen, Execution of detentions in penitentiaries (TULP/GW) National registration of detentions, including detentions for offences against the Opium Act, conducted by the Judicial Detention Service (DJI). Homepage: www.dji.nl/

13.3 List of relevant internet addresses

This list contains only a selection of Dutch websites on the subject of substance use.

Website	Contents
http://www.trimbos.nl/	Netherlands Institute of Mental Health and Addiction
http://www.minvws.nl/	Ministry of Health, Welfare and Sport
http://www.justitie.nl	Ministry of Justice
http://www.wodc.nl	Research and Documentation Centre of the Ministry of Justice
http://www.drugsinfoteam.nl/	Drugs and Alcohol Info Team of Brijder Addiction Care
http://www.unitydrugs.nl	Unity: educational peer project in Amsterdam
http://www.jellinek.nl	Jellinek Addiction Care Amsterdam
http://www.cedro-uva.org	Centre for Drug Research, University of Amsterdam
http://www.intraval.nl	Intraval. Bureau for Research and Consultancy
http://www.aiar.nl/	Amsterdam Institute for Addiction Research

http://www.drugsinfo.nl/	Objective information on drugs for the general public
http://www.ivo.nl/	Addiction Research Institute Foundation, Rotterdam
http://www.ggd.amsterdam.nl/	Municipal Health Service of Amsterdam
http://www.cbs.nl/	Statistics Netherlands
http://www.ggznederland.nl/	Netherlands Association for Mental Health Care
http://www.rivm.nl/	National Institute for Public Health and the Environment
http://www.sivz.nl/	Care Information Systems Foundation
http://www.hiv-monitoring.nl/	HIV Monitoring Foundation (HMF)
http://www.politie.nl/KLPD/	National Police Agency
http://www.prismant.nl/	Prismant: Consultancy agency for the Social Care Sector
http://www.scp.nl/	Social and Cultural Planning Office of the Netherlands
http://www.nispa.nl/	Nijmegen Institute for Scientist-Practitioners in Addiction

http://www.zonmw.nl/	Netherlands Organisation for Health Research and De- velopment
http://www.boumanhuis.nl/	Bouman GGZ (Addiction Care Rotterdam)
http://www.brijder.nl/	Brijder verslavingszorg (Addiction Care North Holland)
http://www.centrummaliebaan.nl/	Centrum Maliebaan (Addiction Care Utrecht)
http://www.vnn.nl/	Verslavingszorg Noord Nederland (Addcition Care Northern Netherlands)
http://www.parnassia.nl	Parnassia, psycho-medisch centrum (Addiction Care The Hague)
http://www.novadic-kentron.nl/	Novadic-Kentron, netwerk voor verslavingszorg (Addic- tion Care North Brabant)
http://www.tactus.nl/	TACTUS, Instelling voor verslavingszorg (Addiction Care Gelderland and Overijssel)
http://www.ggznml.nl/	GGZ Noord- en Midden-Limburg (Addiction Care North- ern and Central Limburg)
http://www.mondriaanzorggroep.nl/	Mondriaan Zorggroep (Addiction Care Southern Limburg)

http://www.emergis.nl/	Emergis – Centrum voor Geestelijke Gezondheidszorg (Addiction Care Zeeland)
http://www.om.nl/english/	Public Prosecution Service (English section)
http://www.intraval.nl/	Intraval-Bureau voor onderzoek en advies (Social Scienti- fic Research Institute)

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List of abbreviations used in the text

2C-B	4-bromo-2,5-dimethoxyphenethylamine
4-MTA	4-methylthioamphetamine
ACS	Amsterdam Cohort Studies
ADHD	Attention-Deficit/Hyperactivity Disorder
AIAR	Amsterdam Institute for Addiction Research
AIDS	Acquired Immune Deficiency Syndrome
ASI	Addiction Severity Index
BIBOB	Public Administration Probity Screening Act
BMK	Benzyl-Methyl-Keton
BZK	Ministry of the Interior and Kingdom Relations
CAM	Coordination Centre for the Assessment and Monitoring of New Drugs
CAPI	Computerised Assisted Personal Interview
CBS	Statistics Netherlands
CBT	Cognitive Behavioural Treatment
CBO	Dutch Insitute for Health Care Improvement
CBZ	Board of Construction of Facilities for Hospitals
CCBH	Central Committee on the Treatment of Heroin Addicts
CCV	Netherlands Centre for Crime Prevention and Community Safety
CEDRO	Centre for Drug Research
CMR	Central Methadone Registration
COFOG	Classification of the Functions of Government
CPB	Netherlands Bureau for Economic Policy Analysis
CRA	Community Reinforcement Approach
DBC	Diagnosis Treatment Combinations
DIMS	Drugs Information and Monitoring System
DNR	National Crime Squad
DOB	2,5-dimethoxy-4-bromoamphetamine
DSM	Diagnostic and Statistical Manual of Mental Disorders
E.K.	Senate
EMCDDA	European Monitoring Centre for Drugs and Drug Addiction
EU	European Union
FIOD	Fiscal Intelligence and Investigation Department
GGD	Municipal Health Service
GG&GD	Area Health Authority
GGZ	Mental Health Service
GGZ Nederland	Netherlands Association for Mental Health Care
GHB	Gamma-hydroxy-butyrate
GMR	General Mortality Register
HAART	Highly Active Anti-Retroviral Treatment
HAVO	Secondary education at middle level
HBV	Hepatitis B
HCV	Hepatitis C
HIV	Human Immune Deficiency Virus
HKS	Defendant Recognition System (of the Police)
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ICD	International Classification of Diseases, Injuries and Causes of Death
IDDT	Integrated Dual Disorder Treatment
IDUs	Injecting Drug Users
IGZ	Health Care Inspectorate
IMC	Inpatient Motivation Centre
ISD	Institution for Prolific Offenders
IVO	IVO, scientific bureau on lifestyle, addiction and related social developments
IVV	Foundation of Information on Addiction Care
IVZ	Care Information Systems Foundation
KLPD	National Police Agency
LADIS	National Alcohol and Drugs Information System
LCI	National Coordination Structure on Infectious Diseases
LIS	Injury Information System
LMR	National Information System on Hospital Care and Day Nursing
LSD	D-Lysergic acid diethylamide
LSP	National Support Centre for Prevention
LTP	LifeTime Prevalence
LMP	Last Month Prevalence
LYP	Last Year Prevalence
MATE	Measurement of Addiction for Triage and Evaluation
MBDB	N-methyl-1-(3,4-methylenedioxyphenyl)-2-butanamine
mCCP	Meta-chloro-phenyl-piperazine
MDA	Methylene-dioxyamphetamine
MDEA	Methylene-dioxyethylamphetamine
MDFT	Multi Dimensional Family Therapy
MDMA	3,4-methylene-dioxymethamphetamine
MIM	Multivariate (Social) Indicator Method
NDM	National Drug Monitor
NEMESIS	Netherlands Mental Health Survey and Incidence Study
NIGZ	National Institute for Health Promotion and Disease Control
NIVEL	Netherlands Institute for Health Services Research
NNIA	No new information available
NPO	National Drug Use Survey/National Prevalence Survey
NVIC	National Poisons Information Centre
OBJD	Justice Documentation Research Database
OMC	Office of Medicinal Cannabis
OMDATA	Public Prosecution Department Data
PMA	Paramethoxyamphetamine
PMK	Piperonyl-Methyl-Keton
RISc	Risk Assessment Scales
RIVM	National Institute for Public Health and the Environment
SCP	National Institute for SocioCultural Studies
SHM	HIV Monitoring Foundation
SOV	Judicial Treatment of Addicts

SRM	Criminal Justice Monitor
STI	Sexually Transmitted Infections
SVO	Steering Committee for the Reduction of Nuisance
TBC	Tuberculosis
TDI	Treatment Demand Indicator
THC	Tetrahydrocannabinol
T.K.	Lower House of Parliament
ТМ	Treatment Multiplier
USD	Synthetic Drugs Unit
VBA	Drugfree Addiction Support Unit
VMBO-p	Secondary practical education at the lower level
VMBO-t	Secondary theoretical education at the lower level
VVGN	Dutch Association of Addiction Physicians
VWO	Secondary education at the higher level, pre-university education
VWS	Ministry of Public Health, Welfare and Sport
WHO	World Health Organisation
WODC	Research and Documentation Centre of the Dutch Ministry of Justice
XTC	Ecstasy
ZonMw	Netherlands Organisation for Health Research and Development
ZORG-IS	Registration System for Mental Health Care

Map of the Netherlands: provinces and major cities

The Netherlands

