

**Assessing Drug Problems and Policies in Switzerland,  
1998-2007**

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## **Commentary of the Federal Office of Public Health (FOPH)**

The report at hand assesses drug policies in Switzerland between 1998 and 2007 and describes the development of the dialogue surrounding drugs by means of interpreting epidemiological and criminological data. The report also makes comparisons to the situation in other countries. This approach resembles an external view and is therefore different from evaluations conducted in Switzerland by Swiss researchers.

However, this external, independent view by an American, Peter Reuter, also entails problems since both the drug discussion and drug policies, and especially the penologic prosecution practice in Switzerland and the United States, differ significantly. For instance, the English term “arrest” is also used to describe “making a complaint to the police” (polizeiliche Anzeige). This is misleading as within Switzerland persons are usually not detained (or: “arrested”) for drug and especially marijuana consumption (please see the commentary by Prof. Killias). Consequently, the conclusions drawn in this report do not align in all respects with the official opinion of the Federal Office of Public Health.

Please see the commentary by Prof. Martin Killias, University of Zurich:

<http://www.bag.admin.ch/themen/drogen/00042/00624/06044/07683/index.html?lang=en>

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## Introduction

This study aims to describe how the drug problems of Switzerland have changed over the period 1998-2007, what policies were implemented during that period and to assess, to the extent possible, how well those policies have worked in reducing the nation's drug problems. Funded by the Swiss Federal Office of Public Health (SFOPH), it is intended to provide a contribution to the global discussion ten years after the resolutions passed in 1998 at the United Nations General Assembly Special Session (UNGASS), as well as to the longer-term discussion of drug policy internationally. There is likely to be particular interest in a study of Swiss drug policy because Switzerland has been prominent in harm reduction innovations, including heroin assisted therapy (HAT) and Safe Consumption Rooms.

The SFOPH has published earlier evaluations of Swiss drug policy (the ProMedDro series) addressed to Swiss policy makers and focused primarily on health related policy issues. This report differs in three ways from these earlier assessments. First, the audience explicitly includes officials and analysts outside of Switzerland; thus it provides more background on the specific institutions of Swiss policy making. Second, it aims to be comprehensive and balanced in its coverage of policy domains; as a consequence it gives considerably more attention to the enforcement of drug laws and what is known about the population effects of those efforts. Third, it is more explicit in attempting to put the data in a policy analytic frame, since its value for international debate in 2009 will be enhanced. It does not make any policy recommendations.

The project began November 1, 2007. It relied entirely on data already collected and was intended to be a synthesis. Most of the data and analyses were from published sources but the Swiss federal statistics office, provided special statistical analyses for the project.

Chapter 1 provides background on two topics. First, it gives a framework for assessing drug policy, identifying the components of the problem and how various interventions might affect them. Second, it gives a brief description of the institutions of Swiss drug policy, emphasizing the importance of the federal system, with considerable autonomy for the cantons and their constituent communes.

Chapter 2 presents the available data on patterns of drug use. It distinguishes between changes over time in general drug use, mostly marijuana, and that of the relatively small population of problematic drug users. Chapter 3 then moves from drug use to drug-related problems, such as disease and crime, and describes how these have changed over time.

Chapter 4 describes Swiss drug policy and how that has changed over the period. It emphasizes law enforcement issues. Chapter 5 is then an assessment of the changes in Switzerland's drug problems and how the various policies and programs may have affected those problems.

## Acknowledgements

This study was dependent on co-operation by many officials and researchers.

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## **Executive Summary**

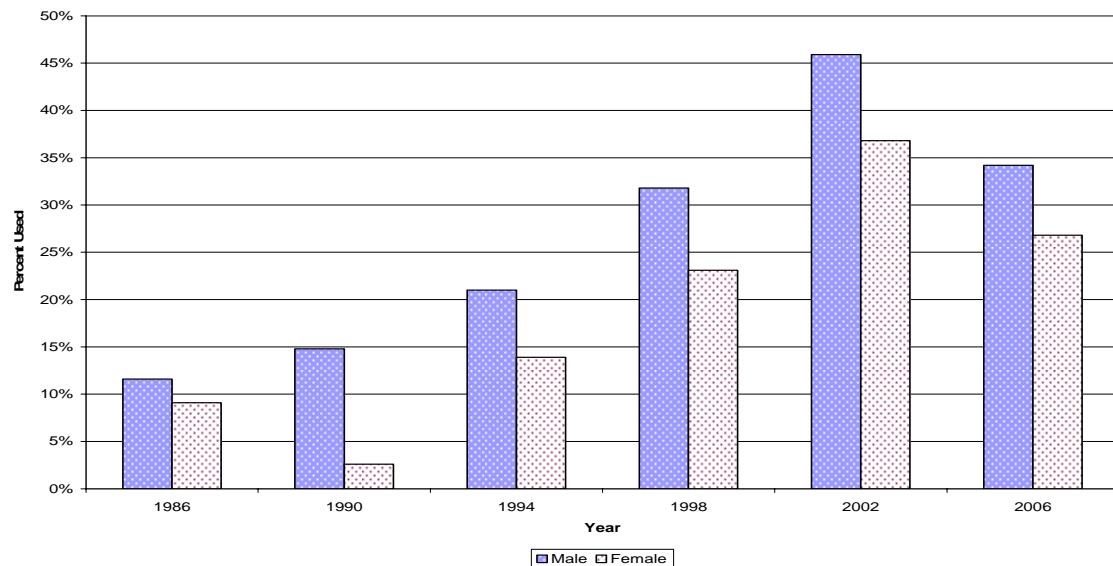
The year 2009 has been a year for reflection on drug policy, as indicated by the discussions at the UN Commission on Narcotic Drugs in March. Given that Switzerland has been a prominent innovator in drug policy internationally, the federal Office of Public Health commissioned a review of how well the nation was doing in addressing what had been in the 1990s a major health and social problem. This study describes how the drug problems of Switzerland have changed over the period 1998-2007, what policies were implemented during that period and assesses, to the extent possible, how well those policies have worked in reducing the nation's drug problems. It draws on existing statistics and primary research studies but offers a specific analytic framework relating each type of drug control program (prevention, treatment, harm reduction, enforcement) to particular parts of the drug problem that it can ameliorate. The study also compares Switzerland's problems and policies with those of other Western nations.

### ***Drug Use***

Cannabis is the most commonly used illegal drug in Switzerland, as it is in almost all Western nations. Among those born after about 1980 in Switzerland, use of marijuana is normative i.e. approximately half of young people experiment with it some time during their adolescence or young adult life. After a long increase, beginning in the 1980s, the percentage of adolescents trying the drug has fallen since the middle of this decade; Figure S1 shows the results of one youth survey. This pattern parallels, though belatedly, the experience of many other Western European nations. Though the trajectory of cannabis prevalence over time is clear, there are large differences in the figures on current use from the many different surveys; it is very difficult to estimate what percentage of the Swiss population is currently using cannabis.

**Figure S1**

**Cannabis lifetime prevalence among 15-year olds according to gender: comparison between 1986 and 2006**



**Source:** Schmid et al. (2007)

Heroin has been, at least until very recently, the principal drug problem for Switzerland, as for most Western European nations. In the mid-1990s Switzerland had a heroin addiction prevalence that may have been the highest in Europe. Switzerland's heroin problem has been declining steadily over the last decade. The estimates of the size of the group are crude but show a reduction from about 29,000 in 1994 to 23,000 in 2002, the most recent year for which an estimate is available. The aging of the population in treatment is a reassuring indicator that initiation rates have been low since the mid-1990s; whereas in 1994 the median age of those in treatment was 26.5 years, that had risen to 30.5 by 2006. The health of the heroin dependent population has been improving.

Cocaine use rose during the 1990s and has continued to spread modestly this decade; police express concern that it has become more private and harder to observe than before. Heavy use of cocaine is largely concentrated among those who were already dependent on heroin. Cannabis is the only drug that is used regularly by a substantial percentage of the population. Heroin and cocaine are the only other drugs that have

caused substantial harm in Swiss society. Party drugs, a cause of great concern in the late 1990s, have not increased substantially since then.

### ***Drug Problems***

Drug policy is concerned with more than drug use. Indeed, the main focus of policy making in the last twenty years has been the adverse consequences of particular kinds of drug use rather than population prevalence. Thus the most important indicators of the success of the policies as implemented may be measures of drug related harms.

Drug-related deaths, most of which are a consequence of heroin dependence, have declined since the early 1990s, from 350-400 per annum to 150-200 per annum in this decade. HIV infections related to injecting drug use have also declined. This may reflect a modest decline in injecting, as opposed to smoking or snorting, of heroin, a decline in needle sharing among users because of Syringe Exchange Programs and the lower population of heroin dependent users.

A distinctive feature of the heroin problem in the 1990s was the emergence, particularly in the major cities of the German-language cantons, of open drug “scenes” that caused considerable public concern. These have largely disappeared, perhaps as a consequence of a combination of factors: enforcement that specifically targeted those markets, rather than private dealing settings; the availability of drug consumption rooms that brought a substantial proportion of the users into better controlled settings and the aging of the users themselves.

Public perceptions of the drug problem have also changed. Whereas three quarters of the population identified it as one of the five major problems of the nation in the mid-1990s, that figure had fallen to one eighth by 2007.

Despite the existence of substantial drug markets in Switzerland, there is a dearth of reference to corruption around drug enforcement. Violence in the drug trade is occasional but not sustained.

### ***Drug Policy***

Drug policy in Switzerland has been more prominent in politics than perhaps in any other European nation. The topic has been actively debate for twenty years, from the

discussion of the HAT trials in the early 1990s to the long-running debate over cannabis legislation that may have come to an end with the decisive rejection of reform proposals in November 2008.

Swiss drug policy in the last decade has been characterized by a consistent application of harm reduction principles, at least to the problems of heroin use. Most prominently, in the mid-1990s, Switzerland pioneered the delivery of Heroin Assisted Therapy (HAT) which is now a routine element of the treatment system. Under HAT, heroin addicts who have failed in other treatment programs, mostly methadone, are permitted to receive heroin in specialized clinic facilities, which also provide other psychosocial services. More patients are in HAT in Switzerland than in any other nation, though HAT client numbers have stabilized at a figure of about 5% of the estimated total opiate-dependent population. The majority of those who drop out of HAT move on to either methadone maintenance or to abstinence programs; unfortunately nothing is known about whether the HAT experience enables them to do better in these subsequent treatment experiences. Switzerland has also developed an unusually accessible methadone maintenance system, delivered both through clinics and private practitioners; it reaches more than half the estimated number of heroin dependent persons. Though the number of patients in methadone maintenance has declined slightly since 2000, the fraction of the estimated heroin dependent population in such treatment has increased.

Though opiate substitution treatment (OST) still accounts for the majority of those in treatment, an increasing share of the small numbers in other forms of treatment are entering because of problems related to cannabis and cocaine.

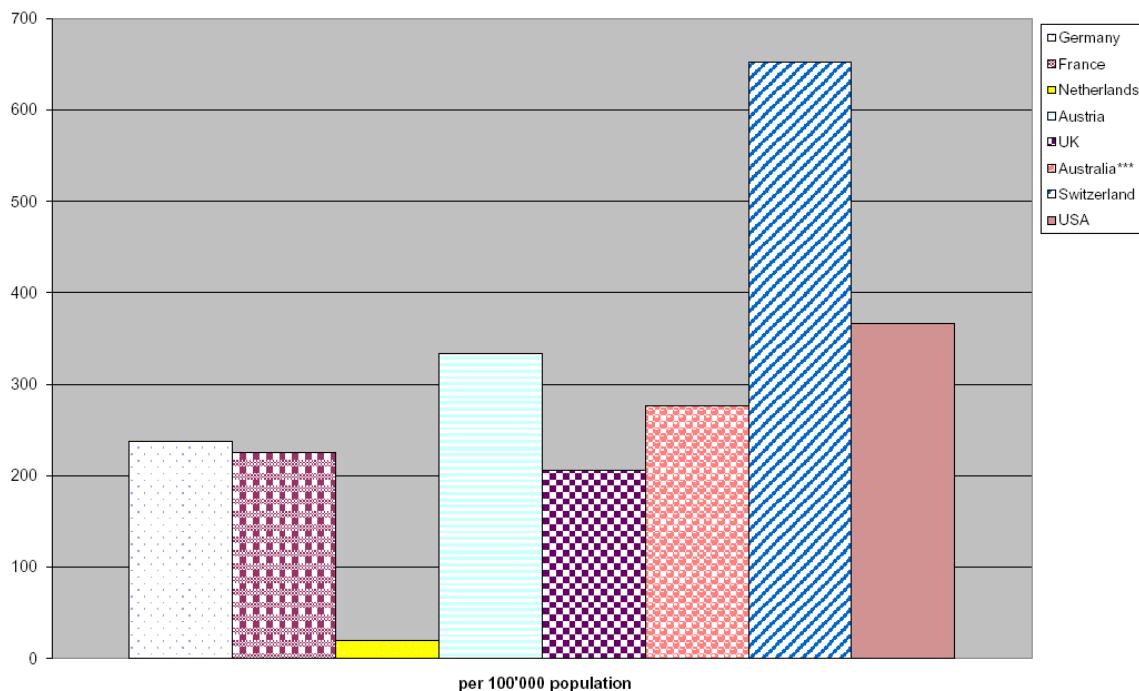
Switzerland has also been a leader in providing Drug Consumption Rooms (DCR), intended to allow for safe injecting practices, though other kinds of consumption are allowed in the facilities. Switzerland also has many syringe exchange programs; the number of needles distributed annually has been declining since the late 1990s. This may reflect both the declining number of regular heroin users and a shift to other modes of consumption.

Simultaneous with the strong emphasis on harm reduction, Switzerland's police vigorously enforce prohibitions on drug use and drug sale. Switzerland stands out from other Western European nations in the stringency of its policing. Total drug arrests

increased substantially in the 1990s and rose slightly in this decade. There was a large decline in heroin arrests (from 18,000 in 1997 to 6500 in 2006), compensated for by an increase in cannabis arrests. About 80 percent of arrests are for possession rather than dealing. Switzerland makes more arrests (per capita) for simple possession of cannabis than even the United States; comparative figures for a number of countries are provided in Figure S2. However at the other end of the criminal justice system, small numbers are sentenced to incarceration; out of roughly 40,000 persons arrested each year for drug violations, fewer than 2,000 receive terms of incarceration. Moreover the total number of convictions and incarcerations for drug offenses has hardly changed over the period 1990-2006. Fewer than one quarter of those sentenced receive terms as long as eighteen months. The majority of arrests are for possession of cannabis and result in fines of 250-300 CHF; these are not even recorded as convictions.

**Figure S2**

**Rate of arrest for cannabis possession per 100,000 population (15- to 64years old)**



Two other features of drug enforcement deserve notice. First, a rising share of those sentenced to prison for drug offenses are foreigners; in 2006 they accounted for

over two thirds of prison sentences. Second, in addition to those receiving prison sentences, an almost comparable number spend time in prison pre-trial and then receive no other incarceration. Pretrial detention serves as a substitute for sentences of imprisonment but is subject to much less scrutiny.

### ***Policy Assessment***

Whether measured by the number of users or the severity of adverse consequences of drug use, Switzerland's drug problem has been declining. Prior to 2004 such an assessment would have had to note the continued increase in cannabis use among youth; now even that has turned in the right direction. Popular opinion reflects this longer-term change; the drug problem is less prominent and the community strongly supports current policies.

Should this be attributed to good implementation of well chosen policies and programs? There are two reasons to hesitate in making such a judgment. First, many of the desirable trends in Switzerland have occurred in other Western nations with quite different policies. Second, there is little evidence that drug policy is the principal driver of these specific changes.

Some other European countries (including the Netherlands and Germany) have seen a similar decline in rates of heroin addiction and a similar aging of the population over the last decade, if not longer. The same is true for the United States, which has adopted very different policies toward heroin users and sellers. Indeed, it is what one expects to see after an epidemic of any addictive substance that has severe consequences to the frequent user. Given the differences in the policy approaches of these nations, it would be hard to attribute this decline of itself to any policy intervention.

The recent decline in cannabis use among youth has also been observed in other Western nations. Indeed in some other nations the decline started earlier and has been, so far, larger,. For example, in the U.K. the decline began about 2000 and rates of youthful cannabis use are now almost one quarter lower than they were at their peak. Similarly large declines have been observed in Australia and the United States. One might reasonably ask whether the large number of cannabis arrests, with their intrusiveness in personal life, serve a public purpose, given that there is a singular lack of evidence in any

country that arrests alone have a deterrent effect, either on the arrestee or potential users generally.

However that is not to say that Swiss policy has had no beneficial effects. The assessment of harm reduction programs should be in terms of their own goals, namely improving the health and social functioning of those who continue to use, and reducing the damage they cause others. The continued monitoring of HAT participants indicate that the gains observed in the initial trials continue; a population of dependent heroin users at great risk of high rates of relapse, blood borne disease and crime are doing better in terms of health and crime outcomes. The much larger MMT population also benefits in the same way. Drug Consumption Rooms may well have contributed to the declines in DRDs and drug related HIV.

Drug problems have a long trajectory. No democratic country has managed to shrink its heroin problem rapidly. It is hard to identify programs that have proven effective in other countries in dealing with a heroin problem that are not operating in Switzerland. Given that heroin has been by far the most problematic drug for the nation that is an indication of a responsive and effective policy implementation.

# Chapter 1

## ***Analytic Framework and Institutional Background***

### **Introduction**

Illegal drugs create a variety of problems (e.g. addiction, mortality, morbidity, disorder, crime) and generate a comparably complex set of responses (prevention, treatment, harm reduction and enforcement). To describe a nation's drug problem and how it responds to that problem requires an explicit analytic framework linking policies (that is laws and programs) to the various aspects of the problems.

### **Analytic Framework**

Table 1.1 presents a list of 8 phenomena that constitute some of the major components of what troubles each nation under the rubric "the drug problem". The list could be expanded but each item of a larger list could be associated with one of the four categories of sources used here: initiation, dependence, distribution and production.

**Table 1.1 Elements of the Drug Problem**

<b>Domain</b>	<b>Source</b>
Adolescents dropping out of school Gateway to other behavioral problems	Initiation
High mortality and morbidity among users and their intimates Crime by users Disorderly conduct of users Large criminal incomes Violence amongst drug sellers	Dependence
Distortion of source country societies	Distribution
	Production

Some of the problems in the list are not as related to the consequences of drug use itself as to initiation of the young into drug use. It is the involvement of young people in

the subculture surrounding illicit drugs (either marijuana or “club drugs”) or with the routine violation of law, and their possible progression to drug dependence that are the central concerns under that head.

Another set of problems is caused by the dependence or abuse of drugs--e.g. spread of AIDS, crimes committed to support expensive illicit drug use--albeit frequently because of the conditions of use that society has created. Cocaine sells in illegal markets for about 20 times its legal price; that helps explain the high level of property crime associated with dependence on cocaine. Use of dirty needles by heroin addicts is partly a function of the prohibition on unauthorized possession of hypodermic needles

Other problem elements, such as killings of rival drug dealers, are not directly related to drug use but to the distribution of drugs; the same killings might result if the state prohibited the sale of popular music CDs. Even if drugs did not adversely affect behavior, the struggle for market and contract disputes in an illegal setting would generate violence. Finally, yet others--e.g. the distortion of social and political institutions in Afghanistan and Burma --are a function of the production of the drugs themselves.

If it were possible to eliminate illicit drug use altogether, all of these problems would either vanish or be much ameliorated. But because different elements of the problems have different sources, they may not move in the same direction at the same time. For example, initiation may decline sharply even while dependence is worsening; this phenomenon has been modeled by Caulkins et al. (2004) for cocaine in the United States. Given that the time from first use to dependence is typically five to ten years, the decline in initiation will not have effects on dependence and abuse related problems for at least that long. Indeed, many countries, including the Netherlands and the United States have had just such an experience within recent decades; five years of low initiation may be accompanied by little sign of reduction in other drug related problems.

### **Matching Programs and Problems**

The standard, though not universal, classification of programs dealing with drug problems is enforcement, treatment, harm reduction and prevention, though increasingly harm reduction and treatment are seen as forming one category “helping users”.. Further

dividing enforcement into the categories of source country control (e.g. crop eradication and refinery destruction) and domestic enforcement (including interdiction of smuggled drugs), we can match program types and the dimensions of the drug problem ; that matching is presented in Table 1.2.

**Table 1.2. Matching Programs and Problem Elements**

<b>Program</b>	<b>Targets</b>
Prevention	-> Initiation
Treatment	-> Drug Abuse
Harm Reduction	-> Adverse consequences of use
Enforcement	-> Distribution
Source Country	-> Imports

Programs are evaluated primarily in terms of the targets suggested by this mapping. Thus primary prevention programs are evaluated mostly in terms of their effect on initiation into drug use; successful prevention efforts will reduce the percentage of non-users or experimental users who become regular users. Reductions in drug related violence are neither expected nor measured because they will occur so far in the future that it would be impossible to relate them to the intervention. Similarly, treatment programs are evaluated in terms of reducing the prevalence of drug dependence and the severity of associated harms and not in terms of their effect on initiation. Harm reduction aims primarily at the adverse consequences of abuse or dependence. Enforcement has the broadest potential set of targets; it may, as discussed below, have effects on initiation and abuse as well as distribution.

Of course programs may affect more than their principal targets; the effects can be positive or negative. Effective treatment programs should reduce distribution-related problems by shrinking the total size of the illegal drug market, thus lowering criminal earnings and, at least in the long-run, violence. On the other hand, increasingly effective treatment may actually worsen initiation problems by removing the most visible and striking negative role models of addicted drug users. That is not a reason for failing to provide funding for drug treatment; it merely points to the difficulty of doing only good. This matching of program types against goals provides a framework for systematic comparative assessment of programs and policies.

## **Institutional Background**

Switzerland with a population of 7.5 million in 2008, has three levels of government, all of which are important for drug policy; federal, canton and commune. There are 26 cantons, ranging in size from 1,300,000 (Zurich) to 15,00 (Appenzell Innerrhoden). The federal government is not the principal decision maker or operator of programs which are in the competency of cantons. It does however have unique responsibilities for international aspects of policy, for coordination of activities of the cantons and for law-enforcement measures concerning trafficking involving several cantons or foreign countries, as well as trafficking connected to organized crime.

At the federal level the chief executive body is the Federal Council, consisting of seven members who each head one of the seven individual federal departments. The presidency of Switzerland rotates among the seven on an annual basis. Perhaps indicative of the great role of communes and cantons in health policy, there is no federal Department of Health. The Office of Public Health (FOPH<sup>1</sup>) is housed within the Department of Home Affairs. There are advisory councils specifically for drug policy but the Federal Council itself is the decision maker at the federal level.

Cantons have the principal policy power in general, except to the extent that federal law specifies otherwise. . Health care is seen as primarily a cantonal function, though some cantons delegate a great deal of responsibility to the larger cities. Law enforcement is also primarily a function of lower levels of government, with federal agencies having responsibility for larger scale trafficking activities. The cantons also tend, in drug policy matters, to be responsive to federal initiatives.

Illegal drugs have been a prominent issue in Swiss public policy since at least the mid-1980s, when heroin emerged as a major health problem. The nation has a history of very active and open debate about drug policy. For example, between 1997 and 1999 the electorate considered three private initiatives, as well as one prepared by the Federal Council (Zobel et al. 2003). In November 2008 a major referendum resulted in strong popular endorsement of existing policies.

Partly this reflects Switzerland's unique openness to ballot initiatives. Citizens vote frequently throughout the year on proposals at every level of government: commune,

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<sup>1</sup> The German acronym is BAG; Bundesamt für Gesundheit.

canton and federal. Any group that collects enough signatures (e.g. 100,000 at the federal level) can get an initiative on the ballot.

The nation has three major language groups.<sup>2</sup> German is the native language of 64 percent of the population, French of 21 percent and Italian of another 7 percent. The language differences are associated with differences in culture and attitudes that are relevant for drug policy. For example, harm reduction has been more readily embraced by predominantly German speaking cantons.

Over the post-war era there has been a substantial population of foreigners resident in the country; in 2006 20.6% of the population consisted of persons who were not Swiss citizens. A growing share of the non-citizen population come from countries outside of Western Europe. Indicative of the growing diversity of the population of foreigners resident in Switzerland, 9 percent are classified as speaking some language other than French, German or Italian. Serb-Croat was the most common language but only accounted for 1.4% of the total population. Many of those from the Balkans arrived during the period of wars surrounding the break-up of Yugoslavia. That they came from countries associated with heroin trafficking is relevant to drug policy; as in many rich nations, such as Australia and France, immigrant groups from production or trafficking countries are heavily involved in smuggling and certain aspects of cocaine and heroin distribution (Paoli and Reuter, 2008).

Switzerland is not a member of the European Union and, unlike Norway, does not formally collaborate with the European Monitoring Center for Drugs and Drug Addiction. It is active in the Pompidou Group, an adjunct of the Council of Europe that is focused on drug issues.

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<sup>2</sup> Demographic data are taken from the web site [www.swissworld.org](http://www.swissworld.org)

## **Chapter 2**

### ***Drug Use in Switzerland***

#### **Introduction**

As in any Western country in the early 21<sup>st</sup> century, cannabis is by far the most widely used drug in Switzerland. Early in this decade Switzerland was among the nations with the highest rates of cannabis use, reflecting a large increase in prevalence in the 1990s. However recent data from a number of surveys show a substantial decline among youth, suggesting that the overall population rates may fall in the future. There is no indication of any major increases for other drugs such as cocaine, amphetamine or ecstasy.

Heroin has been the drug most associated with crime, major health problems and treatment; again this is true of most Western nations with serious drug problems. The available indicators suggest that the decline in heroin use that appeared in the late 1990s has continued into the latter part of the current decade. An increasing share of the treatment population is presenting with cocaine as the primary drug of abuse but this is a lagging indicator, which probably represents the working out of the prior surge of cocaine use among heroin users rather than the emergence of a new problem.

#### **Data Sources**

Switzerland conducts a number of drug use surveys at varying intervals. It also collects administrative data from treatment programs that provide important supplementary information on the characteristics of drug users entering treatment. The surveys include<sup>3</sup>:

EPSS [Evaluation of the AIDS prevention strategy]. Part of the ongoing monitoring of AIDS in the general population, this telephone survey provides data on 17-30 year olds. It has been conducted 11 times since 1987, most recently in 2007

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<sup>3</sup> A good summary of many of these surveys is presented in Depreux et al, 2004.

ESS [The Swiss Health Survey]. A telephone interview, this includes data on 15-39 year olds. It has been conducted four times, most recently in 2007; only a few 2007 results have been published.

SMASH [The Swiss Multicentric Survey on the Health of Adolescents]. The national survey of the health of adolescents aged 15-20. Respondents fill in an anonymous questionnaire, Conducted 2 times since 1992.

HBSC is a WHO sponsored survey targeted at substance use among 15 year olds at their schools. Respondents fill in questionnaires anonymously. It has been conducted every four years since 1978; the most recent survey is for 2006.

ESPAD [European Survey Project on School children use of Alcohol and Drugs]. This is a school-based survey of 15-16 year olds carried out in 26 to 40 European countries every four years since 1995. The age range has been increased in recent years but it remains a school based survey. Preliminary results for the 2007 survey for Switzerland have been released, covering ages 13 to 18.

The national tobacco monitoring survey also includes a few questions on cannabis use and on other illegal drugs. There have also been occasional special surveys, such as the cannabis monitoring survey conducted in four cantons (St.Gallen, Tessin, Waadt, Zürich) as part of a special Cannabis Monitoring project. In addition to providing confirmation of the changes in the national surveys, these studies provide more detail about use patterns.

There are enough differences in methodology among the surveys that it is not useful to make comparisons across surveys. All analyses of time trends use a single survey.

### **Analytic Strategy**

The number of drug users in any given year is a function of three factors; the number of persons who started in prior years, the number who desist from the previous year and the number of individuals who use for the first time in a given year. A decrease in the number of current users from one year to the next is the consequence of the number

of users quitting exceeding the number who start.<sup>4</sup> The published data from surveys in Switzerland (as in most nations) provide only data on current use (including frequency within the past year) and lifetime use. There are no published data on either desistance or, in most surveys, initiation. The surveys thus allow calculation of the total number of users but not of the dynamics.

As a substitute for initiation rates for cannabis there are available data on the percentage of young persons (13-16) who have tried specific drugs (lifetime prevalence), which may serve as a surrogate for initiation for cannabis at least, since so many users begin at a young age. Thus in discussing trends in cannabis use, we give emphasis primarily to the rates of use (which may have begun one or two years earlier) in those young age groups. Since use of other substances, particularly heroin, typically starts at a substantially later age, the prevalence among 13-16 year olds is not a good indicator of the corresponding initiation rates.

Lifetime use rates are also reported both in survey publications and in policy analyses such as the Global evaluation of the Confederation's measures to reduce drug-related problems (ProMeDro) (Zobel et al, 2003). They are of interest as a measure of attitudes and experience in the general population but they are very much a lagging indicator of the effects of policy or changes in attitudes. To see this, consider the effect of a sudden change in attitudes toward cannabis use, perhaps because of new findings about the effects of the drug on psychiatric morbidity. Assume that no new users started this year and that half of last year's users stopped using. Yet the percentage of 15-39 year olds who reported having used the drug at least once would change only slightly; the 39 year olds of last year would be replaced by new 15 year olds, none of whom had used but this would change the lifetime prevalence by only about one twenty fifth<sup>5</sup>. Lifetime prevalence for broad age groups is helpful for tracking changes over a long period of time but we emphasize other sources for examining changes in periods as short as 5 years.

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<sup>4</sup> Ignoring mortality, which is slight in the population age 15-39 that encompasses the vast majority of current users, even among drug users.

<sup>5</sup> Assume that in all cohorts prior to the change, 40 percent of the age group began use at age 15 and no one started using after age 15. The Life Time Prevalence (LTP) for the age group 15-39 would then be 40 percent in the year before the shock. In that year the cohort which had a 40% LTP would be replaced by one that had a 0% LTP and for the whole age group the LTP (assuming the cohorts are of equal size) would fall to 38.4%

Finally, we note that there is consistent evidence that surveys underestimate prevalence of even occasional drug use in the general population. The extent of under-reporting depends on the setting of the interview, social attitudes in the population and a host of other variables. The results of apparently similar surveys can be shockingly different, depending on wording and modality. For example, the World Mental Health Survey reports an estimate of 15.3% for lifetime prevalence (LTP) of cannabis use in France among 15 year olds in 2001-2002; for age 21 the survey reports an LTP of 44% (Degenhardt et al, 2008). In roughly the same year the ESPAD survey, which includes 15 and 16 year olds, reports a prevalence of 38%. Even if the 16 year olds in ESPAD had the same LTP as the 21 year olds in the other survey, the two groups together would have an LTP of about 30%, barely three quarters of the ESPAD figure. We are forced to rely on self-reports but note that they are not strong measures of sensitive behavior.

## Results

Table 2.1 provides the results of the Swiss Health survey for 1992, 1997, 2002 and 2007 for lifetime prevalence estimates for a number of different drugs<sup>6</sup>. The age range, 15 to 39, covers the years of active use. There are three main messages from this Table. First, use of cannabis has become a very common experience for Swiss youth. Second, very few of the population has had any experience with any individual illicit drug apart from cannabis; for no other drug did even 5% report an experience during their lifetime. Third, experience with hard drugs in 2007 was moderately higher than 10 years earlier.

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<sup>6</sup> For 2007 data for individual drugs other than cannabis were reported with different age categories than previously, so it was impossible to present exact comparisons with the earlier surveys for 15-39.

**Table 2.1**  
**Lifetime prevalence of use of specific drugs, 1992 to 2007, by gender**

<b>Lifetime prevalence</b>	Female 1992/93	Female 1997/98	Female 2002	Female 2007	Male 1992/93	Male 1997/98	Male 2002	Male 2007
Hallucinogen	1.2	1.7			3.0	3.8		
Amphetamine	0.6	0.8			1.5	1.7		
Ecstasy	N.A.	1.5	1.5		N.A	2.8	2.9	
Methadone	0.3	0.3			0.5	0.5		
Cocaine	1.8	2.2	1.9		3.5	4.3	4.0	
Heroin	0.7	0.7	0.5		1.9	1.4	1.3	
Hard drugs*		3.3	3.0	4.3		6.0	5.4	8.1
Cannabis	11.1	19.9	21.1	23.7	21.5	33.4	34.2	39.5
Any Drug	11.5	20.4			22.0	33.8		

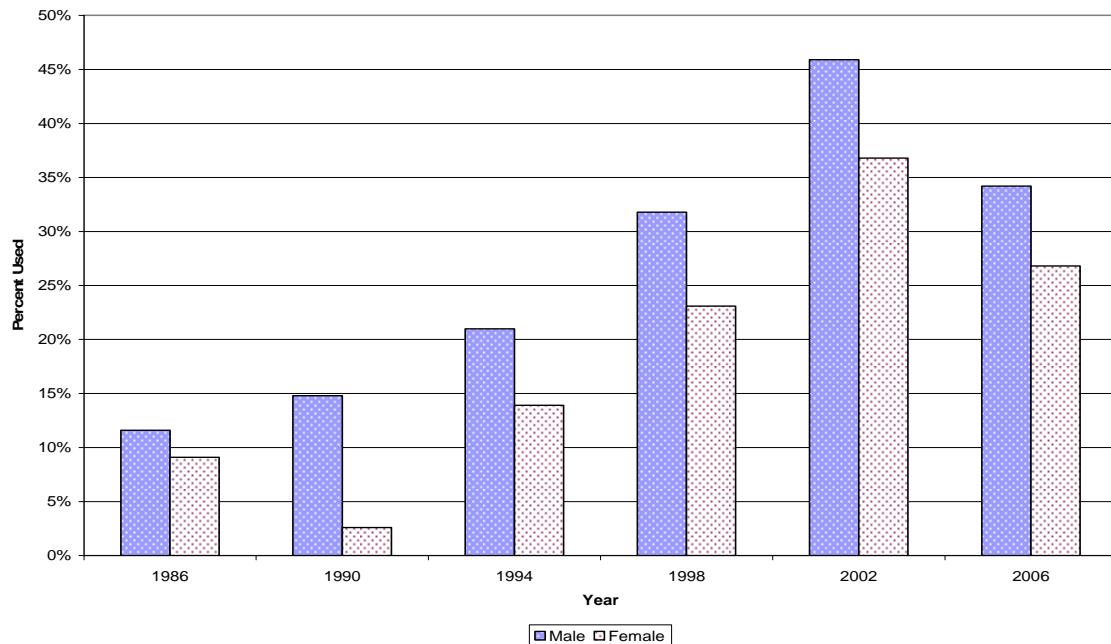
\*Hard Drugs were – according to BfS (2009, personal communication) – defined as all drugs other than cannabis.

**Source:** SFA (1999) BFS: Schweizerische Gesundheitsbefragung, BFS (2004) Schweizerische Gesundheitsbefragung (for data 2002); BFS (2009) Schweizerische Gesundheitsbefragung (for data 2007)

### **Cannabis**

Cannabis use increased in the general population very rapidly during the 1990s, as an increasing share of teenagers experimented with the drug. The latter is well documented by the HBSC survey, which found that a little more than one in ten 15-16 year olds had tried cannabis in 1986; by 2002 that figure had risen to 45%. This was true for both boys and girls, though rates for girls are consistently lower than for boys (as is true in every country). There was a sudden reversal in the middle of this decade; see Figure 2.1, giving the prevalence rates for 15 year olds over the 22 year period. It is worth noting that despite the decline from 2002, rates for 15 year olds in 2006 were still above those in the 1998 survey.

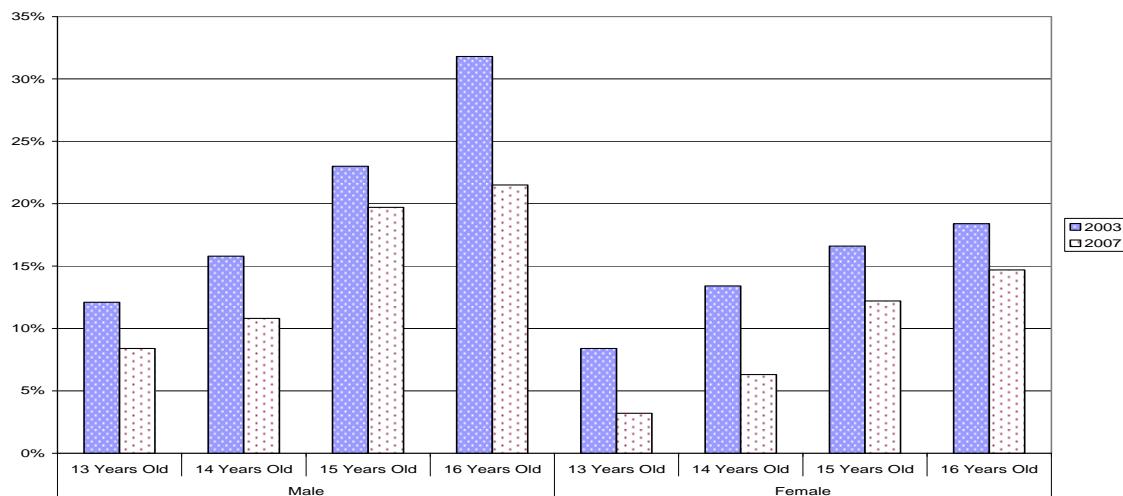
**Figure 2.1**  
**Cannabis lifetime prevalence among 15-year olds according to gender: comparison**  
**between 1986 and 2006**



**Source:** Schmid et al. (2007)

The most recent ESPAD survey for 2007 provides additional confirmation of the recent decline and its large magnitude. The published results allow for comparisons with 2003 at each specific age (separately for males and females) from 13 to 16 years old; it expands on what is available from the HBSC survey by providing data on current use rates. The results in Figure 2.2 show decreases of roughly one third in many age groups for both boys and girls

**Figure 2.2**  
**Cannabis Prevalence Across Age and Sex**



**Source:** SFA (2008)

Another youth survey, primarily oriented to tobacco use, for the slightly broader age group 14-19 showed a similar decline. In 2001-2 the survey found a lifetime prevalence of cannabis use of 37%; that fell to 33% in 2004-5 and still further in 2007-8 to 28%. (Radtke et al., 2008)

Preliminary results from the National Health Survey shows a similar picture for the still broader age group, 15-24, comparing 2007 and 2002. The current use rates for both men and women fell by about one third for both men and women. There is little change in lifetime rates for cannabis, but that reflects the fact that half of those in the age group in 2007, were also in the age group in 2002; the lifetime prevalence for an age group as large as this is a lagging indicator.

**Table 2. 2**  
**Rates of consumption of psychoactive substances, ages 15-24, 2002 and 2007**

	Male		Female	
	2002	2007	2002	2007
Lifetime Cannabis	36.1	37.2	24.4	22.3
Recent Cannabis	16.3	11.5	7.7	5.1
Other Hard Drugs	3.8	4.8	2.7	2.8
Ecstasy	3.2	3.1	1.4	1.4

**Source:** BFS (2008)

A survey in 2000 (Muller, 2001) found that almost exactly half of 19-24 year old women reported having tried marijuana; for men the figure was more than two thirds. Experimentation is indeed the norm for younger cohorts of Swiss adults. Muller also found that about 20 percent of those who reported use in the prior year, used daily or more often

The Cannabis Monitoring Survey has been carried out just twice, in 2004 and 2007. It covers the age range 13-29, Table 2.3 shows that for the younger age groups current use rates declined between 2004 and 2007. For example, for 16-18 year olds it declined from 16.2% to 13.0%, a relative decline of about one fifth. On the other hand the fraction who had tried the drug but were no longer used had fallen much less, only from 26.0% to 25.1%, or about one twenty fifth. Experimentation remains relatively common but there seems to be a substantial decline in the percentage that continue to use.

**Table 2.3**  
**Cannabis Use among 13-29 year olds, by age, 2004 and 2007**

	Age 13-15		Age 16-18		Age 19-24		Age 25-29		Total	
	2004	2007	2004	2007	2004	2007	2004	2007	2004	2007
Never Consumed	88.2	89.3	57.9	61.8	41.7	48.0	49.2	42	53.9	56.5
Formerly Consumed	6.6	6.2	26.0	25.1	40.7	39.3	41.8	47.6	32.8	32.3
Current Consumer	5.2	4.5	16.2	13.0	17.5	12.7	9.0	10.3	13.3	11.2
Total	1841	1922	1875	2007	802	1378	501	271	5019	5578

**Source:** BAG (2008)

For current consumption in a still broader age range, there are data from four waves of the ESS, which covers ages 15-39. The three earlier surveys show the large increase from 1992 to 1997 (5.1% to 7.0%; a relative increase of nearly two fifths) that might have been projected from the data on 15-16 year olds already discussed. However between 1997 and 2002 the increase was much slower, from 7.0% to 7.5% (a relative increase of only one fourteenth). There was a modest decline between 2002 and 2007. This may reflect shortening length of use careers or the exit of earlier non-using cohorts between successive surveys and their replacement by more drug using younger cohorts.

**Table 2.4****Current cannabis consumption, 15- to 39-years olds in 92/93, 97, and 2002 (%)**

	Consumption in the last 12 months				Consumption (in the last week. Base: consumption in the last 12 months)		
	1992/93	1997	2002	2007	1992/93	1997	2002
Female	2.8	4.5	4.4	3.6	30.8	31.0	41.7
Male	7.5	9.4	10.1	10.0	38.7	47.7	55.0
All	5.1	7.0	7.3	NA	36.5	42.3	50.1

**Source:** SFA (2004) BFS: Schweizerische Gesundheitsbefragung 2002.

We conclude this section with a note on data inconsistencies that is important for making comparisons not over time but across countries, which forms a major part of the policy analysis in Chapter 5. The problem is in the estimate of current use rates. For 2002 the national health survey produces a current use rate of 4.6% for the total population age 15-64. It appears that the question used in the questionnaire allows the respondent to determine what is meant by “current”; in many other surveys the respondent is asked about use in a specific period, typically the past 12 months or the past 30 days. The manner in which statistics are reported suggests that it is interpreted as a 12 month question.

However the 4.6 % figure is hard to reconcile with prevalence from other surveys, admittedly with different methodologies. None offers perfectly comparable age ranges. In the published Tables from the national health survey there are “current rates” for 5 age ranges 15-24, 25-34, 35-44, 45-54 and 55-64. The 2002 rate for 15-24 was 12.0%. In contrast, Muller, analyzing yet another survey, reported that for 15-19 year olds the 12 month use rate was 32% and for 20-24 it was 35%. The implied figure for 15-24 year olds was thus 33-34%, almost three times that of the national health survey. The 2002 SMASH survey, covering the age range 16-20, shows a past 30 day prevalence rate of about 35%.<sup>7</sup> The national survey may accurately portray trends in prevalence but seems to substantially under-estimate population rates.<sup>8</sup>

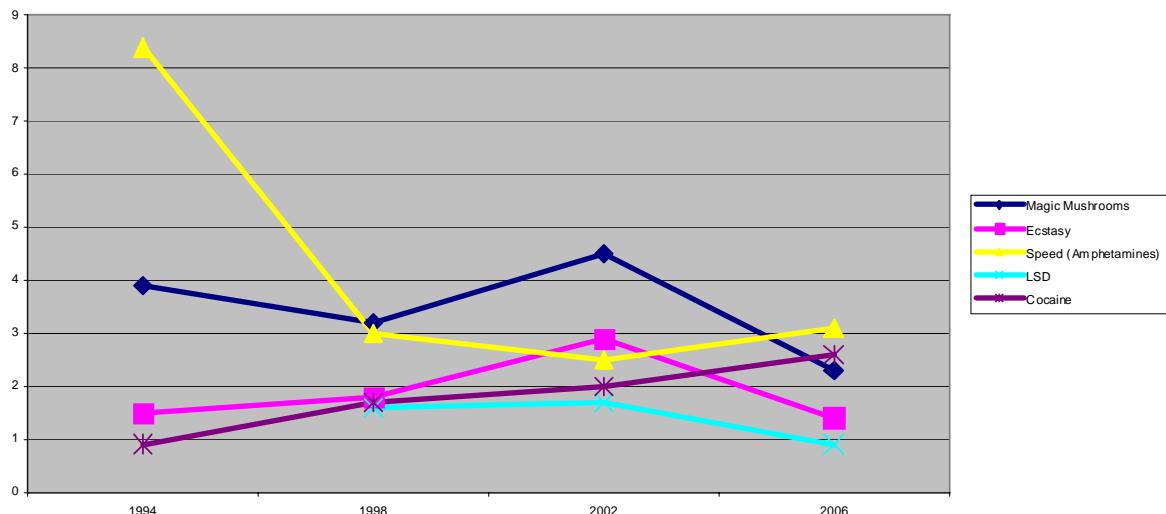
<sup>7</sup> The Tables present results for males and females separately and not for the two groups together.

<sup>8</sup> A more speculative base for doubting the national survey figures comes from comparison of school survey rates across countries. As noted later, Switzerland has among the highest rates in the ESPAD survey, compared to other Western European nations. When comparisons are made for age 15-39, it appears to have a much lower ranking. Perhaps the average length of cannabis using careers is shorter in Switzerland but the findings are implausible.

## Use of other drugs in the general population

As already noted, compared with alcohol and cannabis, other drugs are of minor importance if one looks only at prevalence in the general population. Additionally, of the five drugs tracked by the HBSC survey of 15 year olds, the long-term trend is either declining or stable. Only cocaine has shown a long-term and substantial increase that can also be observed among the population of problematic addicts who in the early nineties primarily consumed heroin. Note though that use of these drugs generally starts at an age greater than 15, so this is not a strong leading indicator.

**Figure 2.3**  
**Lifetime prevalence of other drugs among 15 year olds**



**Source:** Schmid et al. (2008)

Moreover Ecstasy use is substantially higher among certain groups of consumers. In the party scenes of the big cities in Switzerland such as Zürich, Geneva, Bienne and Lausanne, experts estimated the proportion of party-people who are under the influence of ecstasy between 30% and 70% (Sfa 2007a). These estimations are supported by highly focused surveys (Ayer, Gmel & Schmid, 1997). However, it is unclear whether these estimates hold for the most recent years, since the prevalence rate among 15-year olds substantially decreased between 2002 and 2006. According to the latest report (ProMeDroIII) from the Federal Office of Public Health, about 30% to 50% of the

visitors at the so-called “Techno-Parties”<sup>9</sup> show at least a lifetime prevalence of any other illegal substance than Cannabis (BAG, 2006). Among this group, ecstasy is the most prevalent drug, followed by cocaine.

In contrast to ecstasy, amphetamines and methamphetamine seem to spread out into a broader set of sub-groups of society, not just the Party scene. Speed, which in Switzerland refers to amphetamines, is used as to enhance performance in work, sports and the party scene but is also used to control body weight (SFA 2007b).

### ***Heroin***

Heroin has been the principal source of drug related harms in Switzerland for the last twenty years. The fraction of current users in the general population was always tiny, never more than about 1.5% but the consequences in terms of disease, crime and social dysfunction were very substantial. Thus a major goal of drug policy has been to reduce the flow of new users into heroin and reduce the harmful behaviours of those who continue to use heroin.

Given that the numbers are so small and that the harms are associated with dependent use, the emphasis is on tracking the change in the number of those who use frequently. Estimates of this number have been prepared on three occasions, most recently for 2002. The figures are given in Table 2.5. They are based on three data series: methadone admissions, heroin related deaths and arrests for heroin possession.

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<sup>9</sup> Since nowadays the term “Techno” refers to just one particular style of “electronic dance music”, more accurate descriptions of today are referring to the term “electronic dance music” (see also Chinet et al 2006).

**Table 2.5**  
**Estimated number of heroin-dependent users 1994, 1998, 2002**

	Minimum	Maximum
1994	24,000	34,500
1998	21,500	29,000
2002	18,500	25,500

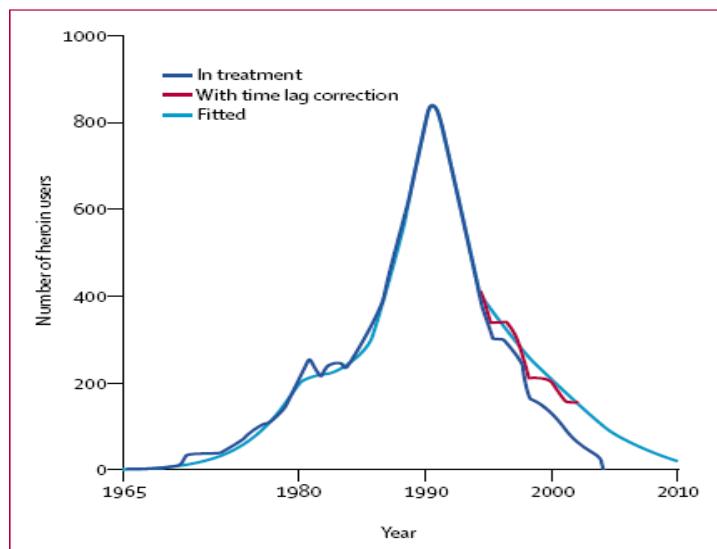
**Source:** Maag (2003)

These estimates show a substantial decline, approximately 30 percent in the average of the minimum and maximum, over the eight year period 1994 to 2002. The error bands however are so wide that this is a heavily qualified conclusion. Yet other studies bear out the finding that the number of heroin addicts declined after the early 1990s and suggest that the decline has probably continued since 2002.

Nordt and Stohler (2006), in a highly cited study of the Zurich treatment population, found evidence that initiation into heroin use declined sharply in Zurich after the mid-1990s. The critical Figures from their study are reproduced as Figures 2.4 and 2.5.

**Figure 2.4**

**Incidence of regular heroin use in the methadone case register for Zurich Canton, March 2005**

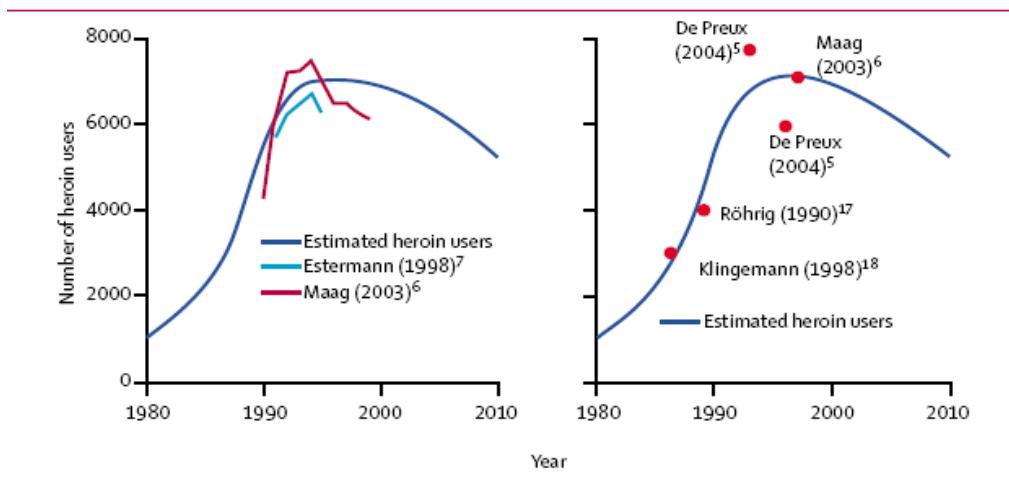


**Source:** Nordt and Stohler (2006)

Figure 2.4 shows the sharp rise and comparably sharp fall in the number of persons who become regular users of heroin in a specific year for the years from 1975 to 2002. Among those who participated in methadone treatment in Zurich in 2005, only about 200 had started regular use of the drug in 1985. The figure for each year until 1990 increased substantially, so that in the peak year of 1990 it was 850. In the following five years the number who became regular users in a specific year fell again to levels below those that prevailed in the early 1980s.<sup>10</sup>

The sharp decline in incidence of regular use after 1990 did not lead to a decline in prevalence until later, as shown in Figure 2.5. This reflects the fact that regular heroin use is a long-lasting behaviour, as indicated by numerous studies (e.g. Hser et al, 2003). Few of those who initiated regular heroin use in the 1980s desisted in the 1990s, so even though annual incidence dropped sharply, it was about 5 years before that led to a decline in the absolute number of active heroin users. Figure 2.5 shows various estimates of the number of heroin users in Zurich, which is thought to account for one quarter of all heroin users in Switzerland.

**Figure 2.5**  
**Estimates of problematic heroin use in Zurich, 1980-2010**



**Source:** Nordt and Stohler (2006)

<sup>10</sup> Nordt and Stohler do not allow for the possibility of long term dependent heroin users not entering substitution treatment within a few years. A paper by Kuebler et al, (2000) found that many out-of-treatment heroin users had been regular users for many years without ever enrolling in methadone maintenance. Frank Zobel (personal communication) points out that most of the Kubler sample were from the French speaking cantons, where treatment became readily available somewhat later. It is unclear how this affects the Nordt-Stohler results.

Additional compelling evidence of the decline in new use comes from data on the age of those in treatment. For example, of those in Heroin Assisted Therapy (HAT), the average age has risen from 30.8 years in 1994 to 35 years in 2005. In the outpatient system, which includes methadone programs, clients with opiates as the main problem substance were on average of age 26.6 years when they entered in 1995 while in 2004 the average age was 30.7 years; average age increased 4.9 months each year. Further support may be found also in the data on heroin and cocaine use among clients entering low threshold facilities (LTFs) as reported in Balthasar et al. (2006). Comparing 1996 to 2006, the percentage of clients who had used heroin in the previous month declined sharply; by one measure from 66% to 43%, even as cocaine consumption increased from 33% to 65%.

What is striking here is that there was no new surge of initiation, given that the price of heroin is reported to have fallen sharply during this period. We return to this later.

### ***Cocaine***

Cocaine has been present in Switzerland, as in Western Europe generally, for many decades but endemic use levels were very low for most of that period. Cocaine use rose somewhat in the late 1990s.

The SMASH study, which focuses on the lifestyle and health of 16 to 20 year olds, shows a sharp increase of cocaine consumption. In 1993 cocaine lifetime prevalence was 1.5% for females and 3.1% for males; in the 2002 surveys those figures had risen to 3.6% and 5.1% respectively. For 15 olds surveyed by the HBSC-study (Schmidt 2003) the same increase was observed. While in 1994 only 0.9% reported a lifetime prevalence of cocaine, this proportion has been steadily increasing up to 2.6% in 2006. Among males, 3.2% had consumed cocaine in the thirty days before the survey.

This still translates into a relatively modest prevalence in the adult population, As seen in Table 2.1. lifetime prevalence among those aged 15-39 had changed only slightly over the period 1994 to 2002; for men from 3.5% to 4.0% and for women from 1.8% to 1.9%. For the 2007 survey the only available trend data cover the age range 15-49. Lifetime prevalence increased from 2.8% to 4.2%; that may be little more than the

disappearance of older cohorts, who came to adulthood before cocaine became available being replaced by cohorts that have had exposure since adolescence. It does not imply that there has been an increase in use by each new cohort since 1992.

Cocaine is a drug with two faces. On the one hand dependent use of the drug occurs primarily in the “classic” drug-scene, where a high proportion of methadone users and/or heavily dependent heroin consumers are also using cocaine and/or crack/freebase (a derivate of cocaine). On the other side cocaine is a lifestyle drug i.e. in the party-scene or for some “performance-possessed” people (SFA 2007c). A study from Chinet et al. (2003) where young people out of the party-scene have been asked about their drug consumption 28% of the 17 – 20-year olds reported cocaine consumption within the last 3 months.

A cocaine indicator showing a large increase is the share of treatment admissions for which cocaine is the primary drug of abuse. For the outpatient population other than methadone patients<sup>11</sup>, the share rose from about 5% in 1995 to over 20% in 2004. For the inpatient treatment population the increase was from 10% to over 40% in 2005. This is consistent with the impression of experts that cocaine dependence has not created a new group of treatment clients but has primarily changed the drug use behaviour of the existing client population. The age of cocaine users in treatment has been rising in parallel with those entering in need of treatment for opiate dependence.

### **Concluding Comments**

The most important recent change is the decline in youthful cannabis use. Might the downturn recorded in various post 2004 surveys prove more than a temporary blip? A review of surveys in other nations suggests that changes as large as those recorded in these youth surveys are rarely one time events but rather the start of longer run declines, typically lasting a decade or more. There is no forecasting model for this phenomenon but some evidence of long waves, a phenomenon which has been recognized for many years in the epidemiology of alcohol consumption (e.g. Skog, 1986).

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<sup>11</sup> The study does not include methadone patients who receive their substitution therapy from private physicians; these constitute about 60% of MMT patients.

## Chapter 3

### ***The Adverse Consequences of Drug Use and Markets***

Drug policy is designed to do more than reduce drug use, as discussed in Chapter 1. It also aims, both directly and indirectly, to reduce the adverse consequences of drug use. These consequences are driven partly by the level of drug use as measured by the prevalence in the general population but also by its composition across drugs and across types of drug users. An adult who occasionally uses cannabis will cause much less harm to himself and society than a college age student who is a regular user of cocaine. A further factor is the conditions under which the drugs are purchased and consumed; for example, injecting heroin in a Drug Consumption Room poses less risk of death by overdose than does injecting in a clandestine setting.

This chapter presents the available data on how certain adverse effects of drugs have changed in Switzerland over the study period. Data are readily available on some health consequences, in particular drug-related deaths and AIDS. Much less data are available on the crime or disorder consequences, which are the other domains of society that are most affected by drugs, particularly dependent drug use and by the marketing of drugs. We include the public concern about drug problems as one measure of the consequences of drug use and distribution; one goal of a state is to reassure the populace that it is able to reduce public health and social problems.

The indicators of health consequences consistently point to a decline in Switzerland's drug problems over the last ten years. The number of drug related deaths in particular fell sharply from its peak in the early 1990s (when it ranged between 350 and 400) to bout half that level in this decade (150-200). HIV rates have also fallen sharply. The public concern about drug problems fell sharply.

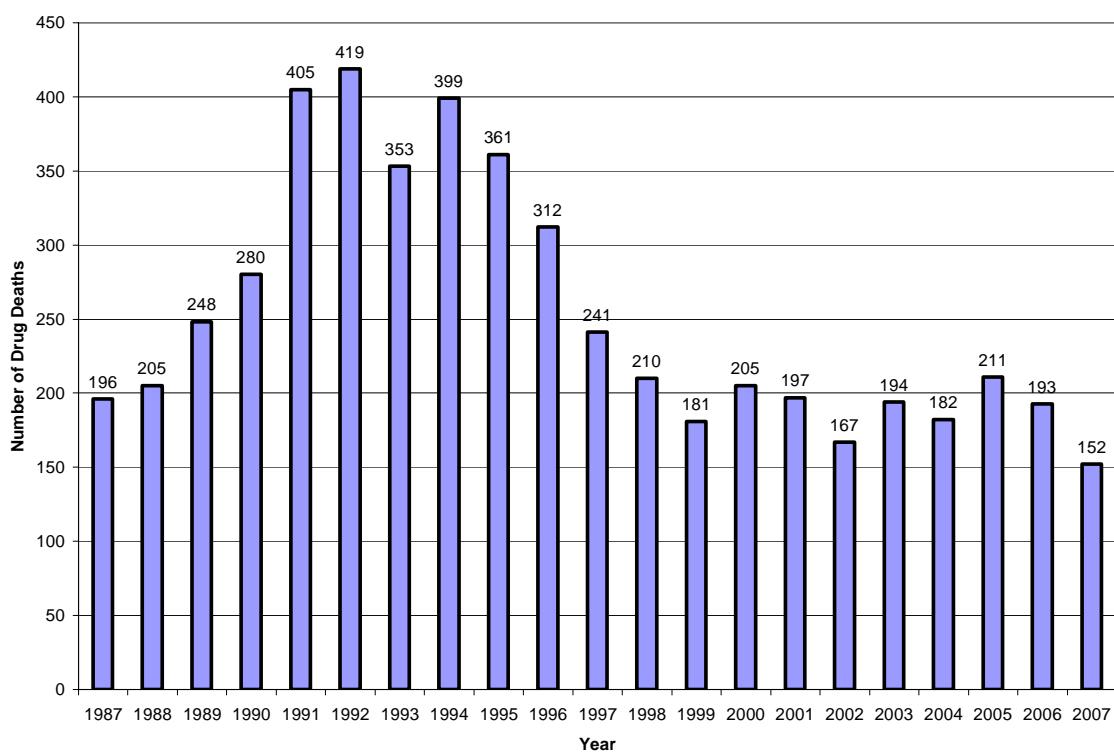
#### ***Drug-related Deaths***

Data on the number of individuals who die as a consequence of using illicit drugs have been gathered for many years from Medical Examiner reports; see Figure 3.1. It is important to note the substantial limits of these figures. AIDS deaths in which needle use is the primary source of infection are not included. AIDS deaths with injecting drug use

as the primary risk factor peaked at about 300 in 1994 and then fell rapidly and substantially so that by 2006 the number was less than 25.

Figure 3.1 thus includes only deaths for which the drug(s) were the acute cause. In addition to AIDS related deaths these figures exclude for example deaths from liver failure that might have its origins in injecting drug use that led to Hepatitis C many years earlier. Nor do the data include homicides that relate to the drug trade. In Switzerland the second exclusion is probably minor but the exclusion of deaths in which drug use was the long-term rather than acute cause may have a large effect;

**Figure 3.1**  
**Drug-related Deaths, 1987-2007**



**Source:** fedpol (2008) Schweizerische Betäubungsmittelstatistik 2007

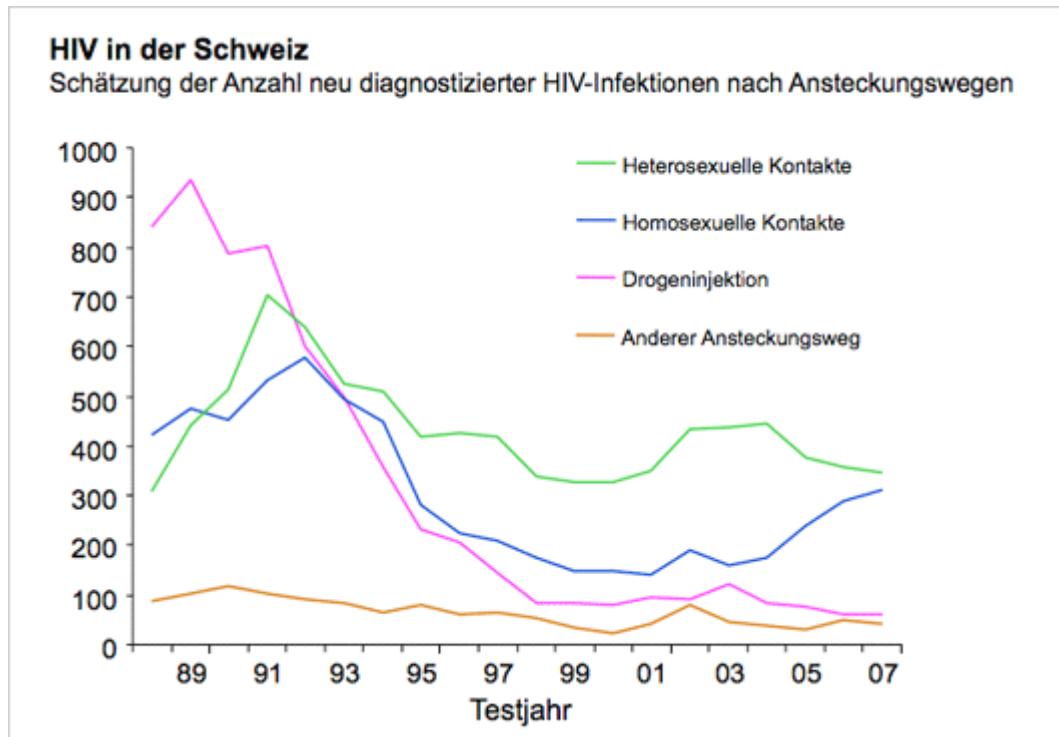
Figure 3.1 shows once again the worsening of the problem in the early 1990s, the reduction in the late 1990s and stabilization since about 2000.

## HIV

One factor that led to the mobilization of Swiss efforts to reduce drug problems was the realization that drug injecting accounted for a substantial share of HIV infections in the late 1980s. As shown in Figure 3.2, the number of injection related HIV infections fell sharply throughout the 1990s from its 1989 peak and again has been stable since about 2000.

**Figure 3.2**

### Numbers of newly diagnosed HIV-infections by principal source of infection



**Source:**

[http://www.bag.admin.ch/hiv\\_aids/01033/01143/01498/index.html?lang=de&bild=19460](http://www.bag.admin.ch/hiv_aids/01033/01143/01498/index.html?lang=de&bild=19460)

Additional information is available on the extent of needle sharing, which is the link between heroin use and HIV. Clients of Low Threshold Facilities are periodically surveyed about their risk behaviour. The data in Table 3.1 come from individuals who report injecting drugs at least once in their lifetime. This criteria gathers about 90% of the questioned persons in the surveys from 1993 until 2000 and about 75% in the sample of 2006. This itself shows a considerable decrease of clients who inject drugs for the latest period of survey. Even among heroin users there has been a substantial decrease between

1993 and 2006 in the share for whom injection is the dominant; the figure fell from 90% to 49%. It is possible that this was a consequence of the decline in the price of heroin; injecting is the most efficient method for consuming heroin and the incentive to inject falls when the price of heroin goes down. However injection was the dominant form of consumption for 2/3 of regular cocaine consumers

**Table 3.1**

**Development of the consumption of clients from the low-threshold-institutions  
(NSE)**

Consumption/therapy		1993 (n=1119)	1994 (907)	1996 (n=944)	2000 (n=924)	2006 (n=1156)
Intravenous consumption	% at least once drugs injected	89	89	91	90	75.9
	% in the last six months drugs injected	85	85	66	79	56.1
	% new intravenous consumers (<= 2 years)	30	24	14	7	5.6
	Average number of years of intravenous consumption	6.7	7.8	8.8	11.8	14.8
	Average number of injections per week		18.9	17.7	13.7	13.6
Intravenous consumption at least once	% Heroin consumers	99	99	99	98	?
	% Cocaine consumers	82	91	92	88	?
	% Cocktail * consumers	66	79	85	75	?
Frequency of consumption during the last month**	% regular heroin consumers	61	63	67	54	44
	% regular cocaine consumers	23	27	31	27	59
	% regular cocktail consumers	16	30	37	25	17
Substitution treatment	% in methadone treatment	35	45	45	56	54.5
	% in heroin programs			11	4	3.7

\* Cocktail is the mixture of cocaine and heroin

\*\* Frequency of consumption related to the total of the respondents

Regular consumption = several times a week

**Source:** Die Drogenpolitik der Schweiz. Drittes Massnahmenpaket des Bundes zur Verminderung der Drogenprobleme (MaPaDro III) 2006-2011 and Balthasar et al. (2007a),

### ***Crime and Disorder***

Though drug related crime and disorder are among the principal consequences of illegal drugs that concerns the public, there are no systematic data available, either in Switzerland or any other nation. In the United Kingdom the government has created a Drug Harms Index in which property crime is a major component (MacDonald et al, 2005, 2006); implicitly this identifies declines in property crime generally as attributable in significant part to reduced drug consumption. This has been heavily criticized (Stevens, 2007) and there is no empirical foundation in Switzerland for identifying the relationship between crime levels and drug use.

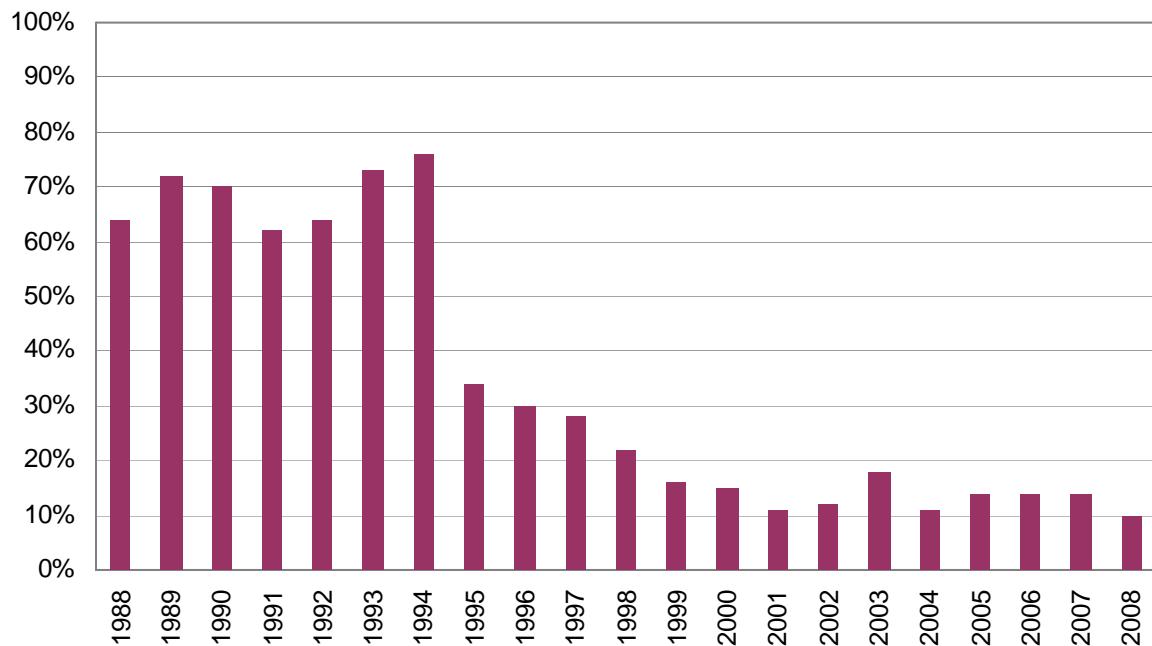
### ***Public Opinion***

Figure 3.3 shows the percentage of Swiss residents who stated that drug problems constituted one of the nation's five leading problems, in annual surveys from 1989 to 2008. From 1989 to 1994 the percentage ranged from 60 to 75 percent. In one year it fell by half, to about 35 percent in 1995 and then fell by another half over the following 4 years. Since 1999 the figure has ranged between 10 and 18 percent.

It is interesting to speculate first as to why the level of concern fell so sharply from 1994 to 1995 and then why it stabilized after that. 1995 is not a peak for other drug problem indicators. The Nordt and Stohler (2006) analysis suggests that 1995 was well past the peak of heroin initiation in Zurich and probably Switzerland generally. DRDs did not begin their sharp fall till the following year. Though the principal drug scenes were substantially cut back before 1995, there may have been a lag in public recognition. However 1995 coincided with the implementation of the HAT trials; that may have provides some assurance to the public that the problem would be substantially reduced.

It is also worth noting that ballot initiatives proposing major changes have been firmly rejected, whether they proposed returning to the pre-1990 emphasis on abstinence (in 1997) or to essentially legalization of drugs (1998). In 2008 more than two thirds of those voting approved the statutory form of the “Four-Pillar Policy”, described in Chapter 4.

**Figure 3.3**  
**Percentage identifying illegal drugs as one of the five major national problems,  
1989-2008**



**Source:** GFS.Bern/Credit Suisse (2008)

The stabilization after 1999 suggests how little role cannabis plays in the public perception of Switzerland's drug problems. Cannabis use among youth continued its rapid rise throughout the period to 2002 and probably 2004; this did not lead to any rise in concern about the problem; we treat the modest one year spike in 2003 as anomalous.

## Chapter 4

### ***Drug Policy as Implemented***

Switzerland as a nation has been extremely, perhaps uniquely, active in drug policy. There has been extensive discussion of a range of issues, particularly related to harm reduction and to cannabis policy. This has involved all three levels of government and many civil society organizations. There have been numerous ballot initiatives at all three levels of government. Switzerland has as a consequence been a leader in innovation, particularly with respect to harm reduction. On the other hand, efforts to change cannabis policy, generally in a less restrictive direction, have repeatedly failed, most recently in a November 2008 referendum initiative.

Since 1990 the Swiss policy has been characterized as “Four-Pillar”. It has acknowledged that there are separate and distinct roles for four classes of programs: Prevention, Therapy, Harm Reduction and Law Enforcement (BAG, 2006). When first enunciated in the early 1990s this was a distinctive national approach. Now, with slight differences in terminology, it is a fairly standard Western approach.

Heroin Assisted Therapy, the most innovative program in Swiss drug policy, was adopted before 1998 but the study period has seen it become an accepted and routine treatment intervention, endorsed in that same 2008 referendum by over two thirds of voters. Its effects are limited because only about 5% of heroin dependent users enroll in it; more than ten times as many enroll in methadone programs.

Enforcement of laws against cannabis generates a very large and growing number of arrests for possession; the figure for 2006 was one quarter higher than in 1998. Heroin possession arrests declined sharply in that same period; most the fall occurred in the late 1990s. The 2006 figure is only two fifths as high as that of 1998. Cocaine arrests on the other hand were quite stable over the entire period. No other drug generated a substantial number of arrests. Over 80 percent of all arrests were for possession charges only.

Most arrests result only in fines. The number of sentences of incarceration for drug offenses is low, whether measured as a population rate or relative to arrests, and has slightly declined in the ten years to 2006, even as the number of arrests has increased.

This is partly explained by the fact that cannabis possession arrests, which are an increasing share of all drug arrests, generate almost no incarceration. Foreigners now account for the great majority of those sentenced to prison.

## **Prevention**

It is singularly difficult to provide a description of “prevention policy” in most countries because it is so dispersed. The service delivery unit is mostly the school and there is not much tracking of the level or content of what is provided by the individual schools. We were unable to obtain specific information that advanced on what was reported in ProMeDro III.

A recent publication by the Federal Office of Public Health (BAG, 2006a) identified the particular sources of vulnerability to substance use among youth in Switzerland. It concluded that rather than tailoring prevention programs specifically to drug problems, they should deal with the more general vulnerability. It was not possible to establish whether this has been implemented.

## **Treatment**

We focus here on the nature of programs available, having discussed changes in the demand for treatment in previous Chapters.

Switzerland is one of a group of Western nations that provide ready access to treatment services for those who want them and who achieve a high penetration as a consequence. Others in that group include Australia, the Netherlands and the U.K. The Swiss treatment sector is unusually rich in terms of the variety of services offered and the settings in which they are provided. About 40% of substitution treatment occurs in specialized clinics; 60% of patients receive their drugs from one of 2,500 private practitioners.

Methadone maintenance treatment (MMT) remains the core service, accounting for a majority of all treatment episodes, even as the number of persons seeking treatment for drugs other than opiates has increased. Heroin Assisted Therapy accounts for a much smaller fraction and is discussed separately below; buprenorphine, which is used frequently in substitution programs in France, accounted for less than 3% of all

substitution treatments in Switzerland. The modest decline in the numbers receiving methadone since 2000 (Figure 4.1) is consistent with the decline in the size of the population of drug users dependent on heroin that we noted in Chapter 2. It is still the case that a large fraction those dependent on heroin were in treatment in the course of the year. Indeed, comparing the first and most recent year for which estimates of the number of heroin addicts are available (1994 and 2002), the fraction in MMT rose from about 50% to 75%.<sup>12</sup>

Data on treatment other than methadone and HAT is incomplete, since reporting by services is voluntary.<sup>13</sup> The number of in-patient treatment slots is about about 1,000<sup>14</sup>, making it a small element of the overall treatment sector in the country. The number of users in outpatient programs other than methadone (mostly providing psycho-social services) is harder to assess but appears to be less than 6,000.

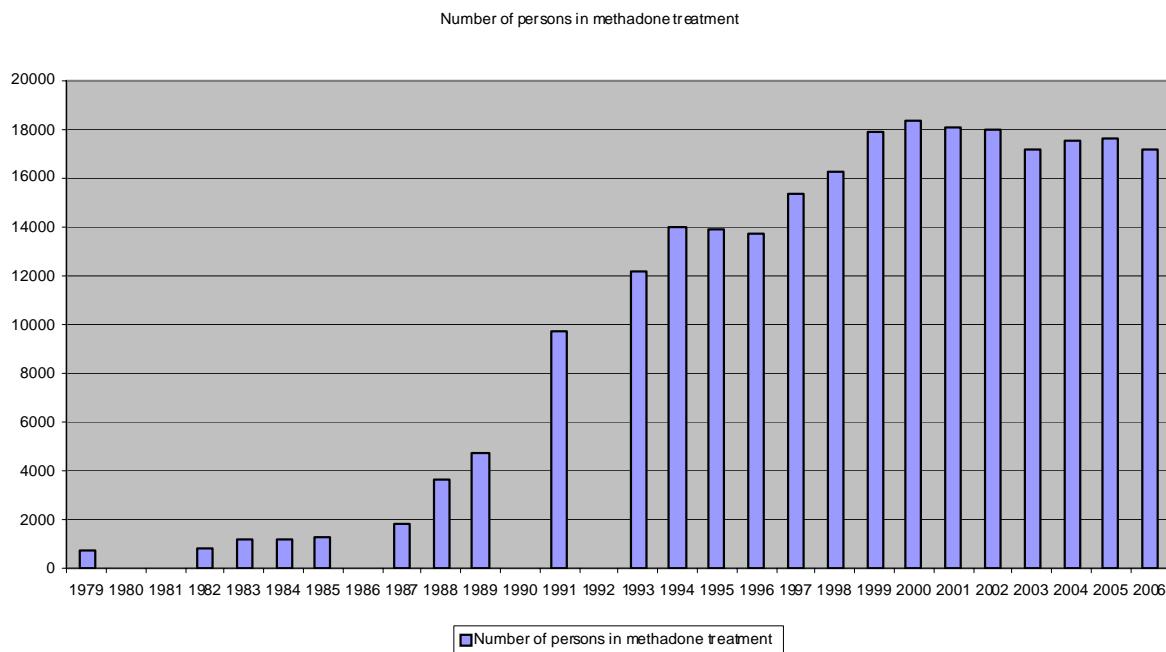
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<sup>12</sup> This calculation uses the mean of the high and low estimates reported by Maag (2003), as given in Table 2.4 above.

<sup>13</sup> For in-patient treatment the system is Act-info-FOS, which is operated by the ISGF. For ambulatory programs the system is SAMBAD, which is operated by SFA

<sup>14</sup> This figure does not include inpatient detoxification places, therapeutic communities or day care therapy programs.

**Figure 4.1**



**Source:** Act-info: Nationale Substitutionsstatistik (Methadon)  
(<http://www.nasuko.ch/nms/db/index.cfm>)

In programs other than substitution treatment, there has been a long-term shift away from heroin as the main drug of abuse of entering clients. For example, in the relatively small population of in-patient clients, over 60% entering in 1997 were opiate abusers; that figure had fallen to just over 30% by 2005. The shift was to cocaine; in 1997 for about 15% of entering patients, cocaine was the primary drug of abuse; in 2005 the figure was almost 40%. The same trends hold for psycho-social programs; opiates were the primary drug of abuse for 80% in 1997 and just under 50% in 2004. For these programs the growth was both in cocaine and cannabis as the primary drug of abuse. A case register study in the canton of Zürich by Nordt & Stohler (2006) showed that “every second person began their first substitution treatment within 2 years of starting to use heroin regularly. (Nordt & Stohler 2006:1830) The same study concluded that, “The population of problematic heroin users declined by 4% a year. The cessation rate in Switzerland was low, and therefore, the prevalence rate declined slowly.”

The cannabis treatment figure remains low relative to other Western nations. The EMCDDA (2007), on the basis of data from 21 of its 25 member countries, estimated that

cannabis was the primary drug of abuse for 20 percent of all treatment cases, and 29% of all first admissions, in EU countries in the most recent year for which data were available. The total number had trebled between 1999 and 2005. Cannabis admissions were exceeded only by those for heroin. The rates and rates of increase varied considerably across countries within Europe; for France cannabis admissions were 30% of all treatment admissions, whereas for some other EU countries the figure was less than five percent.<sup>15</sup> In the United States cannabis is now the most frequently mentioned primary drug of abuse for treatment admissions.

All treatment data bases show an aging of the entering population in Switzerland. This is least surprising for HAT, where the average age of new and re-entering enrollees in 1995 was 30.7 years, compared to 35 years in 2006.<sup>16</sup> For psycho-social programs the median age of enrollees increased from just over 25 in 1995 to almost 30 in 2004. This was not the result of a change in the composition of the drugs used by the patient population because there was some aging for all three drugs: opiates, cocaine and cannabis. The aging was least for cannabis and started only after 2003.

### Heroin Assisted Treatment

The numbers in Heroin Assisted Treatment (HAT) has stabilized at a much lower level than MMT, about 1,200. Figures for HAT 1999-2005 are given in Figure 4.2 . The trials which provided the basis for the introduction of HAT as a regular option for heroin dependence were completed in 1997. The system grew by more than 50% in the following four years but then leveled off. There are few unfilled places (capacity utilization was at 91% in 2005) but the general view of experts is that there is no unmet demand for this specific treatment service. The cantons of Bern and Zurich account for 70% of the total number of HAT patients; these two cantons account for only 30% of the country's population and probably less than half the number of heroin dependent users.

Though hardly controversial any longer in Switzerland, as confirmed by an overwhelmingly positive vote in the November 2008 referendum, HAT continues to be

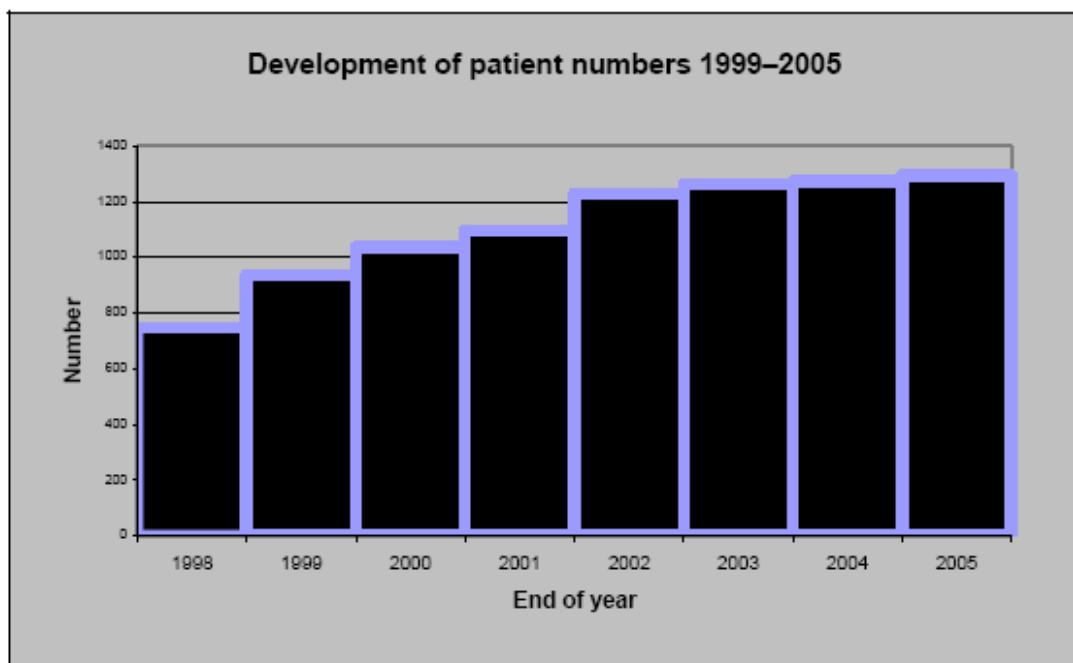
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<sup>15</sup> The comparisons offered here are only for the longer-term EU countries (the 15 members in 2004, before additional members were admitted), since most of the new members were still in transition in terms of drug use prevalence.

<sup>16</sup> Excluded were those who stayed in the program without break and who thus aged by one year each year.

the subject of skepticism in many countries; see for example the comments of McKegny (2008). It is thus worth briefly presenting the available evidence on the outcomes of HAT, particularly those less well known studies that have appeared since 2000, long after the trials were completed.

**Figure 4.2**

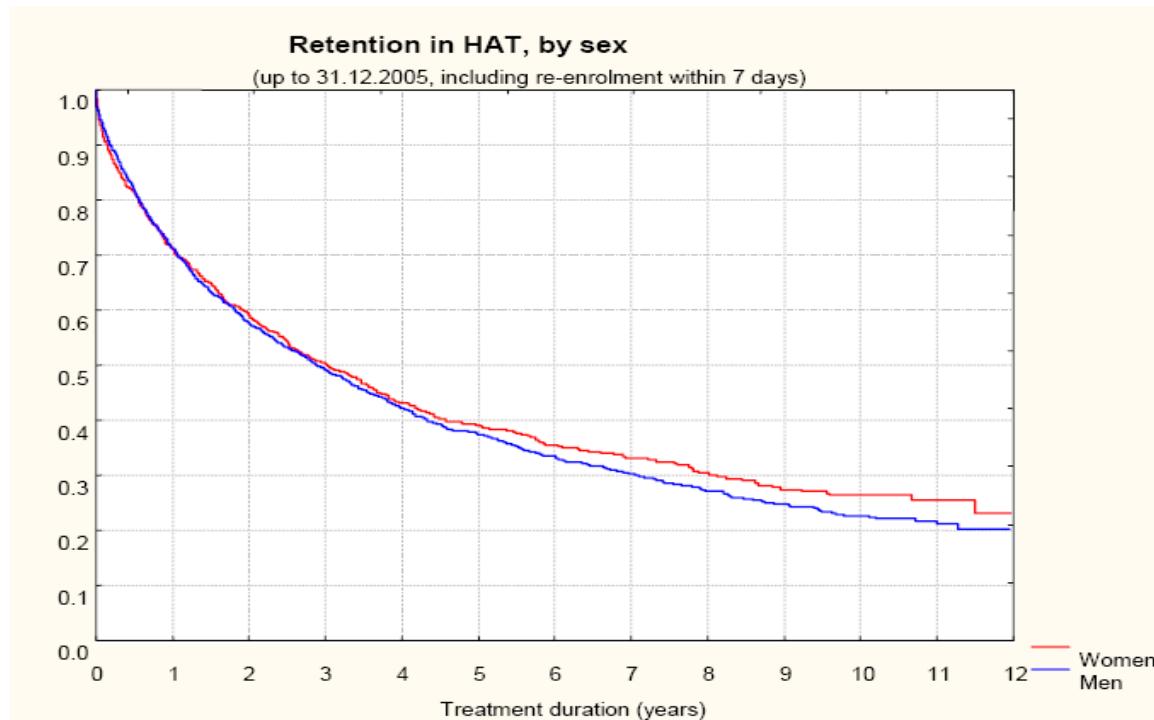


Source: FOPH, HAT database, 2005

Most valuable is the study by Rehm et al. (2001). Two findings are of particular interest. First, patient retention was much higher for HAT than for MMT; at the three year mark nearly half of those who entered were still in the program whereas typically half of MMT entrants drop out within the first two years (e.g. Del Rio et al, 1997). Second, Rehm, et al. found that more than 60 percent of those who left HAT did so in order to take up another treatment option. Most of those seeking other treatment went into a methadone maintenance program (60 percent), but almost 40 percent went into an abstinence program. There are no studies of how well these former HAT patients perform in these other programs but it is important that HAT enrollment is for so many patients a transitional rather than terminal state. Figure 4.3 updates a key Figure in

Rehm et al.; they had data only through 6 years beyond entry, whereas these data extending the follow-up to 12 years at which point 20 percent still remain in HAT.

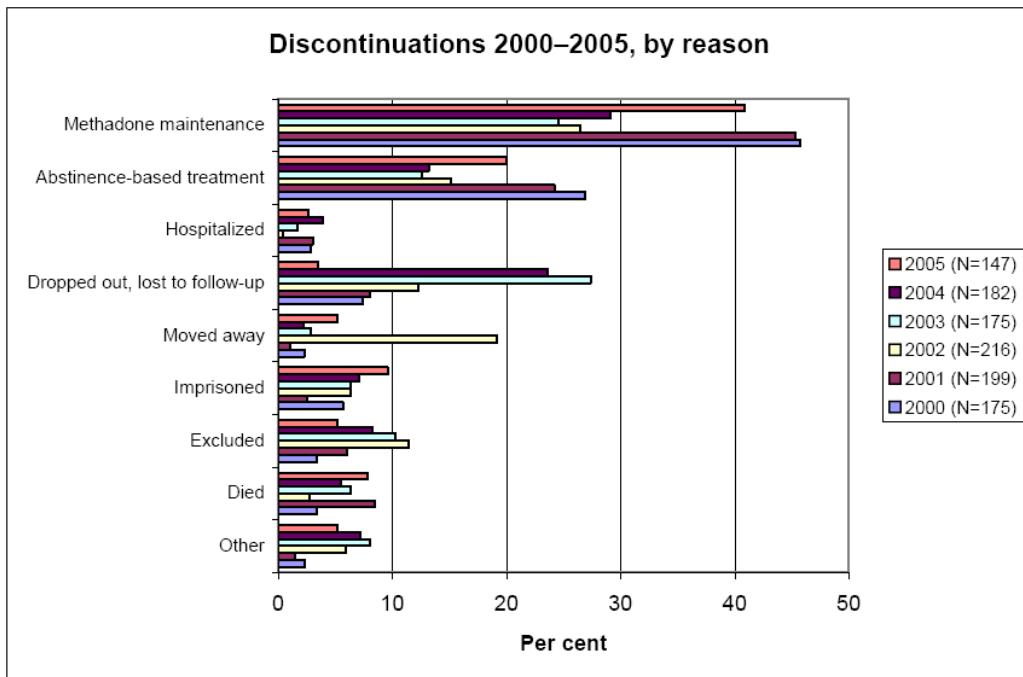
**Figure 4.3**



**Source:** ISGF: HEGEB-Monitoring, 2006

Figure 4.4 shows that since 2000 most of those leaving the program go to some other form of treatment, with an increasing share going into methadone. Outcomes in terms of employment and social functioning show substantial gains but in a population that has been drug dependent for 20 years or more, there is still a great deal of psychiatric morbidity and other dysfunction. There has been no systematic effort to update the costs of HAT provision; most HAT programs now also provide methadone so that one cannot simply take the total HAT program budget and divide by the patient population. The Office of Public Health estimated that the program costs per day in 2005 were between 50 and 70 CHF (BAG, 2006). If the benefits were as estimated for the trials in the 1990s (Free, 2001), this represented a net benefit of 26 to 46 CHF.

**Figure 4.4**



Source: ISGF, HAT monitoring, 2005  
 Fig. 7: Discontinuations 2000–2005, by reason

The central question is why HAT attracts such a small share of all Swiss heroin addicts. In no year have more than 1,300 patients enrolled, less than 5% of the estimated heroin dependent population. Even taking into account that many have dropped out to try other treatment programs, it is unlikely that as many as 10 percent of Switzerland's 23-29,000 heroin addicts have participated in the program at any time. Why do so many resist the lures of essentially free heroin? The answer may be that the drug is provided, by a policy decision, in a way that makes it clearly medicine rather than recreation; there may be more fundamental barriers to higher uptake rates. This is discussed further in Chapter 5.

### **Harm Reduction**

Switzerland may have a greater array of harm reduction programs than any other country. It was an early adopter of Drug Consumption Rooms, intended to provide a safer setting for those who would use drugs, particularly injecting drugs. It has many

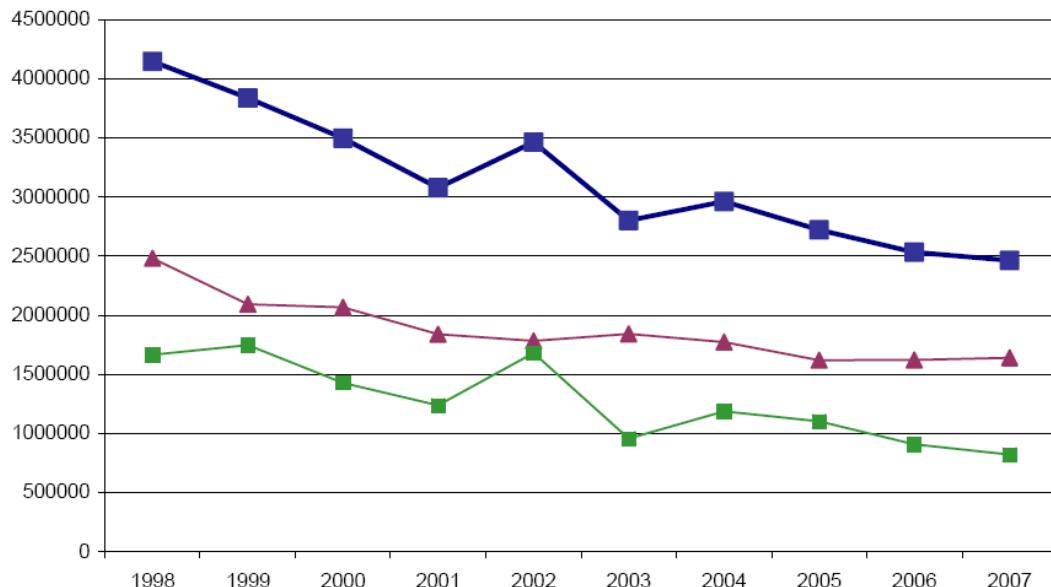
Syringe Exchange Programs (SEPs), while HAT is a major innovation, now being implemented by an increasing number of other countries in conscious imitation of the Swiss program (Fischer et al., 2007).

Clean syringes are distributed through Low Threshold Facilities (LTFs) which provide methadone with few of the usual program requirements of MMT; LTFs are intended to reduce the extent of heroin use and needle sharing among active heroin users. Syringes are also distributed by pharmacies. We were unable to obtain data on the total number distributed by all sources.

As noted by Zobel et al. (2003) in the review of ProMeDro covering 1998-2002, there had been a substantial drop in the number of syringes in 1995; from about 6.4 million syringes in 1993, the LTF distribution total fell to 3 million in 1995.. Zobel et al. conjectured that this might represent enrollment in the first HAT programs. The decline seems larger than could be accounted for by that factor alone. Assume that 1,000 users entered the program in 1994 and that each of them injected 14 times per week, a 1996 figure reported in Gervasoni and Dubois-Arber (2007; p.14). Each user would account for 700 needles per annum and the total number of needles required by the 1,000 would be only 700,000, barely 20 percent of the observed decline. We are however unable to offer any other credible explanation, though the reduction both in the number of heroin dependent users and the switch to non-injecting modes may have contributed.

**Figure 4.5**

**Syringes exchanged at Low Threshold Facilities, 1998-2007, by whether an injection room was also available**



**Source:** infodrog (personal communication)

Pharmacies appear to be playing a declining role in the distribution of syringes. Samitca et al. (2006) examined the role of pharmacies in dispensing needles in the canton of Vaud (whose capital is Lausanne). Whereas in 1996, shortly after the opening of the LTFs, the pharmacies dispensed 15,542 per month (60% of estimated total) the number had fallen to 8,520 in 2003 (20% of the total).

Apart from needle exchange, there were 13 drug consumption facilities (DCF) in 7 towns in Switzerland in 2003 (Zobel and Dubois-Arber, 2004), at which users can inject and smoke their drugs under the supervision of trained medical personnel. Those personnel do not inject the users but give advice about how to do so safely and offer access to medical and social services.

This Report has given little attention to variation within Switzerland. However it is impossible to discuss harm reduction without noting that there are strong regional differences. German speaking Switzerland has been much more willing to accept innovations such as needle exchange, and injecting rooms than has been either the French or Italian-speaking cantons.

## Enforcement

More detail is offered on this aspect of Swiss drug policy than on others because it has received less attention in prior assessments.

### *Arrests*<sup>17</sup>

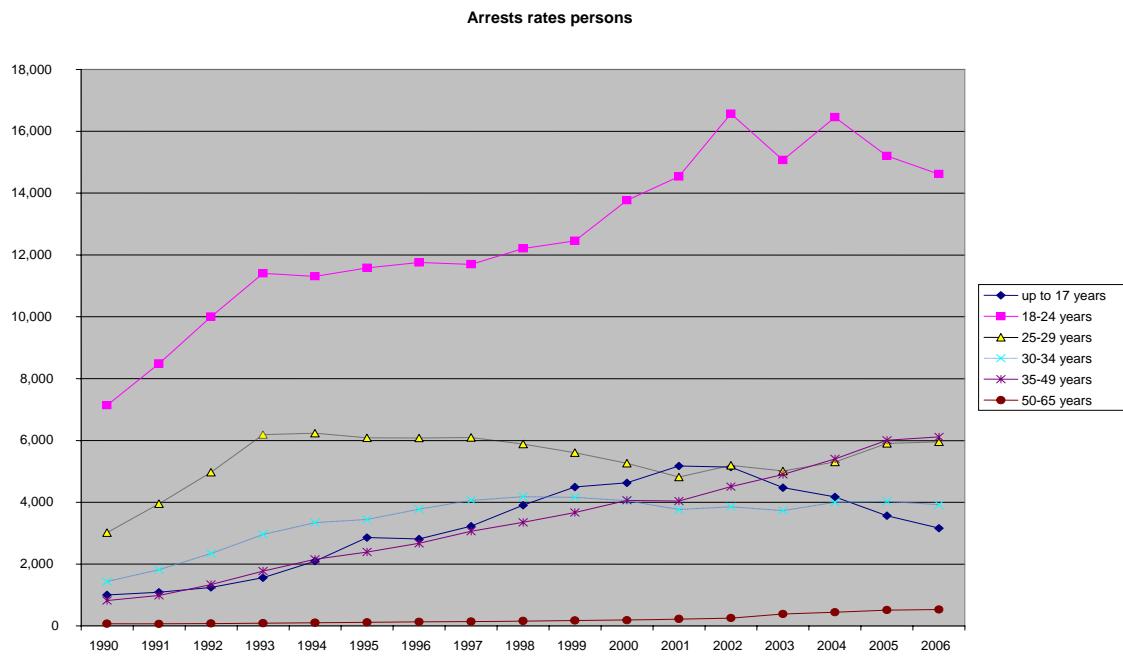
We start by noting that the term arrest is not commonly used in analyses of Swiss drug enforcement. Instead prior reports such as Zobel et al. (2003) present data on “charges for drug use”, separating out those charged by drug type, whether they have ever been arrested before or whether the charge is for trafficking or possession. Cannabis is not treated any differently from other drugs in Tables in these Reports. It has been argued (Maag, personal communication) that cannabis possession offenses should be treated differently since most such arrests are handled with a simple fine and do not result in a criminal record. We believe that the term arrest is simpler and conveys nothing more serious than does “charges for drug offenses” and that this Report is following prior practice in including cannabis possession offenses/arrests along with other charges.

The number of persons arrested for drug offenses more than doubled through the 1990s, from 14,500 in 1990 to 32,000 in 2000 and then stabilized over the next six years; in 2006 the figure was just over 34,000. Almost 90% of those arrested are male. About half of those arrested in 1990 were aged 18-24; the share in that age group has declined steadily over the following years, so that it was just 40% in 2006. The age group whose share has grown is 35-39; from 4% in 1990 it had risen to 9% in 2006. The relevant numbers are presented in Figure 4.6

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<sup>17</sup> We note that there are three different concepts that can be used for measuring arrests; offenses (or charges), arrests (events) and persons. If an individual is arrested for possession of both cannabis and cocaine; that is two offenses (or charges) but one arrest event. If an individual is arrested twice within a year that will generate two arrests but one person arrested. While our preference is to use Persons, as a more meaningful measure of intensity of enforcement, in many instances we were only able to obtain information on offenses.

**Figure 4.6**  
**Number of persons arrest for drug offenses, by age, 1990-2006**



**Source:** BfS (personal communication)

For measures of the composition of arrest by drug type we do not have person level data and must use the number of charges; there is an average of about 1.5 charges for each arrestee. The data by drug is given in Table 4.1, covering only arrests for drug consumption, which account for more than 80 percent of all arrest charges. It shows a large decline for heroin (about 60%) occurring between 1996 and 2001; from 2001 to 2006 the decline was quite slight. Cocaine arrests fluctuated around 9,000 throughout the period.

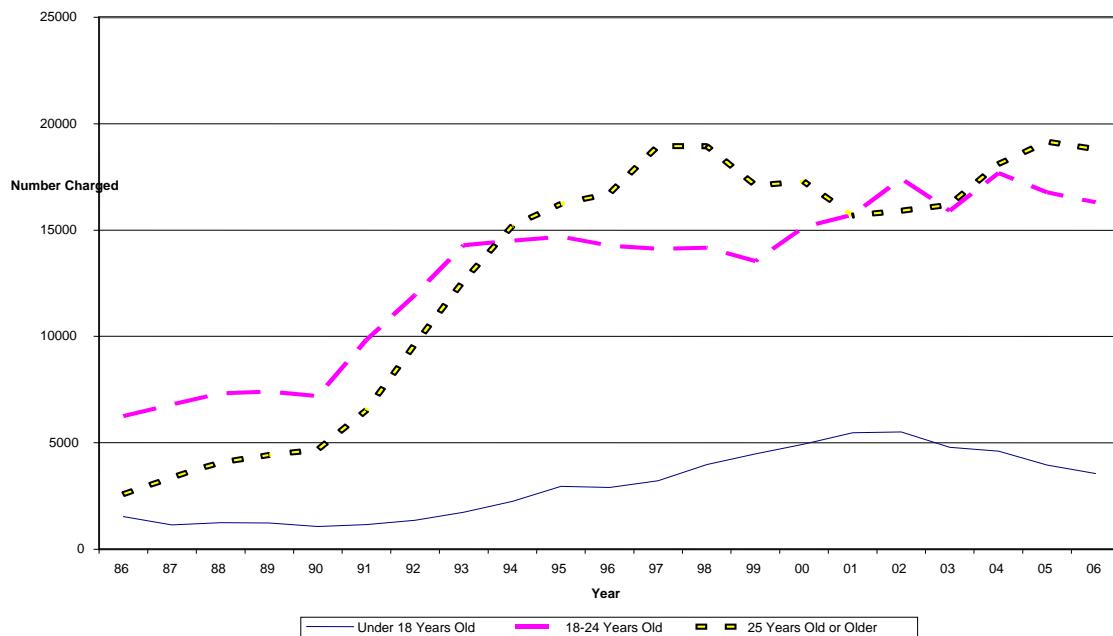
**Table 4.1**  
**Drug Possession Arrests by drug type, 1996-2006**

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Cannabis	24062	26219	28141	27744	31339	32580	36216	33204	36961	35735	34138
Heroin	17764	17808	15870	13450	11721	9579	7022	6960	7002	7074	6468
Cocaine	9620	10515	10398	9880	8664	8206	8577	9252	9994	10060	9570
Party Drugs	2417	1619	1059	916	1627						
Ecstasy						1353		798	775	952	84
Other	1849	3137	3104	2994	3464	2707	2765	2874	3058	3684	3319

**Source:** fedpol

Figure 4.7 shows the aging of the drug using population that we noted in Chapter 2. Amongst those arrested for consumption offenses, the share that were under 18 fell sharply from 2002 to 2006.

**Figure 4.7**  
**Possession charges by age, 1986 to 2006**



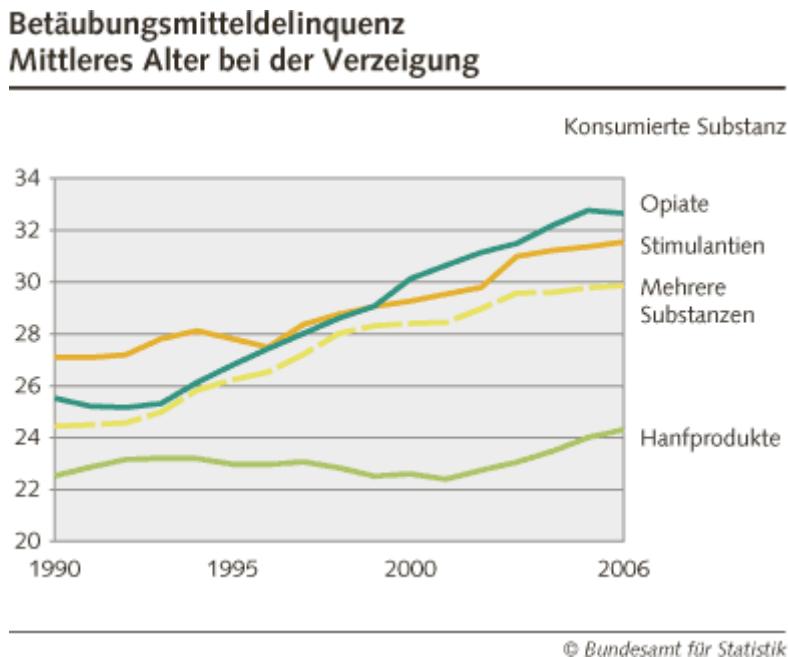
**Source SFA (2007)**

The aging is also reflected in the median age of those arrested for specific drugs, as shown in Figure 4.8. For opiates the median age rose from about 25.5 in 1994 to about 32.5 in 2006. Cannabis arrestees are much younger and the median age was stable at

between 22.5 and 23.5 for most of the period. Starting in 2003 the median age rose, so that by 2006 it was over 24 for the first time.

Further evidence of the decline in the scale and openness of heroin dealing is shown in Figure 4.9 which shows the change in dealing arrests by substance. In 1993, near the height of the open drug scene in Zurich and Bern, opiate dealing arrests peaked at 5,731. Since then the number has fallen steadily and substantially, so that by 2006 it was barely 20% as high, at 1,265. There have been more recent and modest declines in the number of dealing arrests for both cocaine and for cannabis.

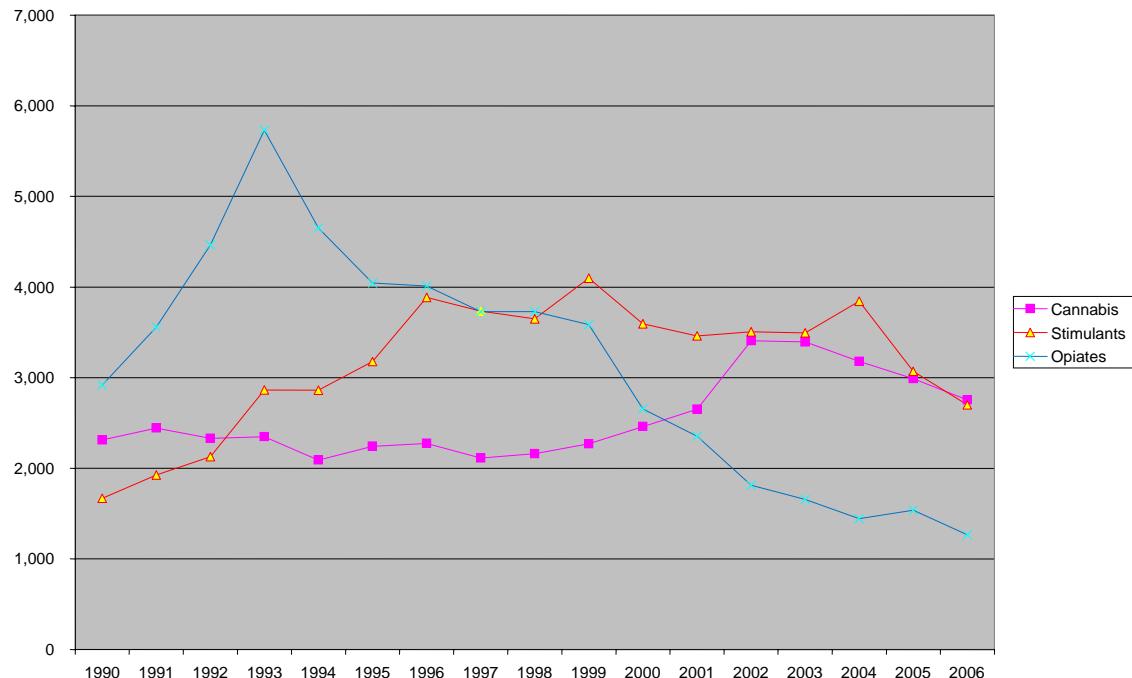
**Figure 4.8**  
**Median age of possession arrestees, by type of drug, 1990-2006**



The age profile of arrests shows again the concentration among young men. As indicated in Figure 4.10, the population rate (per 100,000) is far higher for 18-24 year olds than for any other age group. Figure 4.10 shows the rates for each age group for the two years 1997 to 2006; the rates are slightly higher for 2006 than for 1997 for all but the youngest age group.

**Figure 4.9**

Number of arrests for dealing according to substances

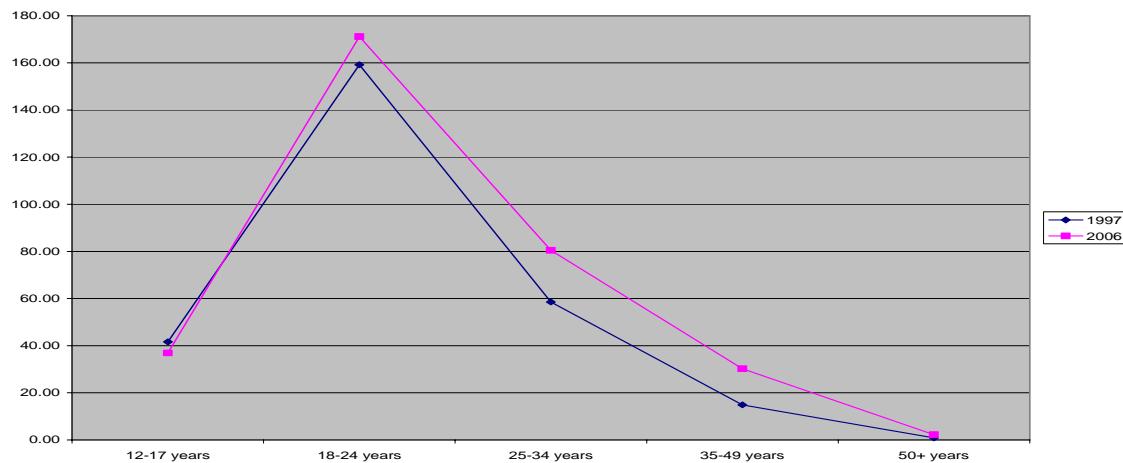


**Source:** BfS (personal communication)

These Figures again show how much drug dealing is a young man's business.

**Figure 4.10**

Number of arrests for dealing with cannabis (population rate per 100'000)



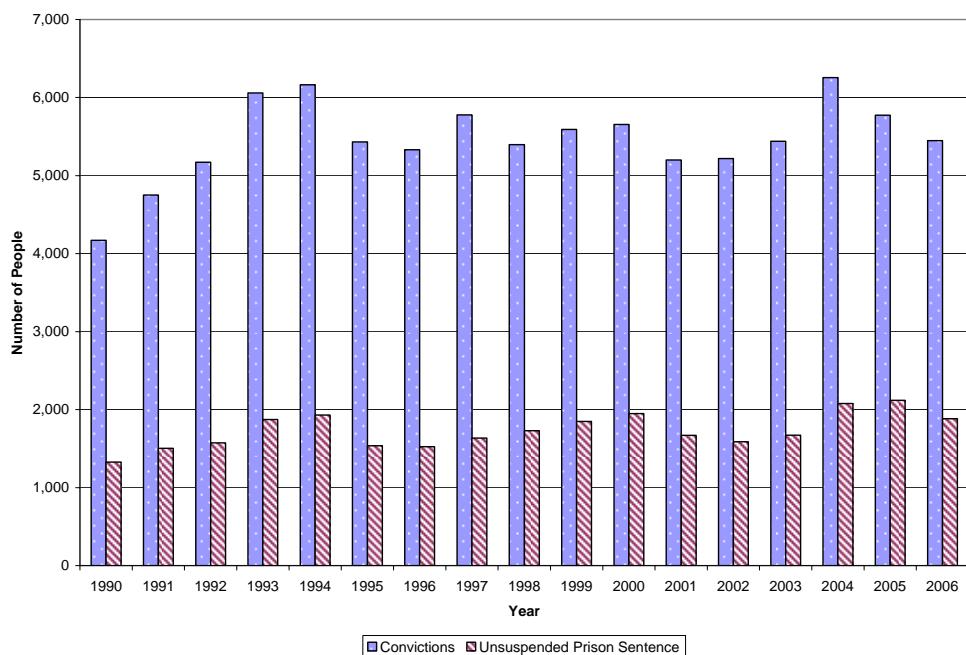
**Source:** BfS (personal communication)

### ***Conviction, Sentencing and Incarceration***

Arrest is just the first step in law enforcement. It is a sanction in itself but a modest one compared to incarceration. The many arrests generate few sentences of incarceration. The vast majority of those arrested for cannabis possession were fined 250-300 Swiss Francs by a local magistrate. Their conviction does not even appear in the counts of convictions, which only involve the results of proceedings in higher courts. This explains the fact that recorded convictions each year are only about one sixth as high as the number of arrests.

In no year did more than 2150 individuals receive prison sentences. Indeed, even as a share of convictions for drug dealing the incarceration figure is modest, typically less than one third. The modal sentence is some form of supervised release, roughly equivalent to probation in the United States; such sentences typically account for 40 percent of all sentences. Figure 4.11 shows the number of convictions and the numbers receiving prison terms.

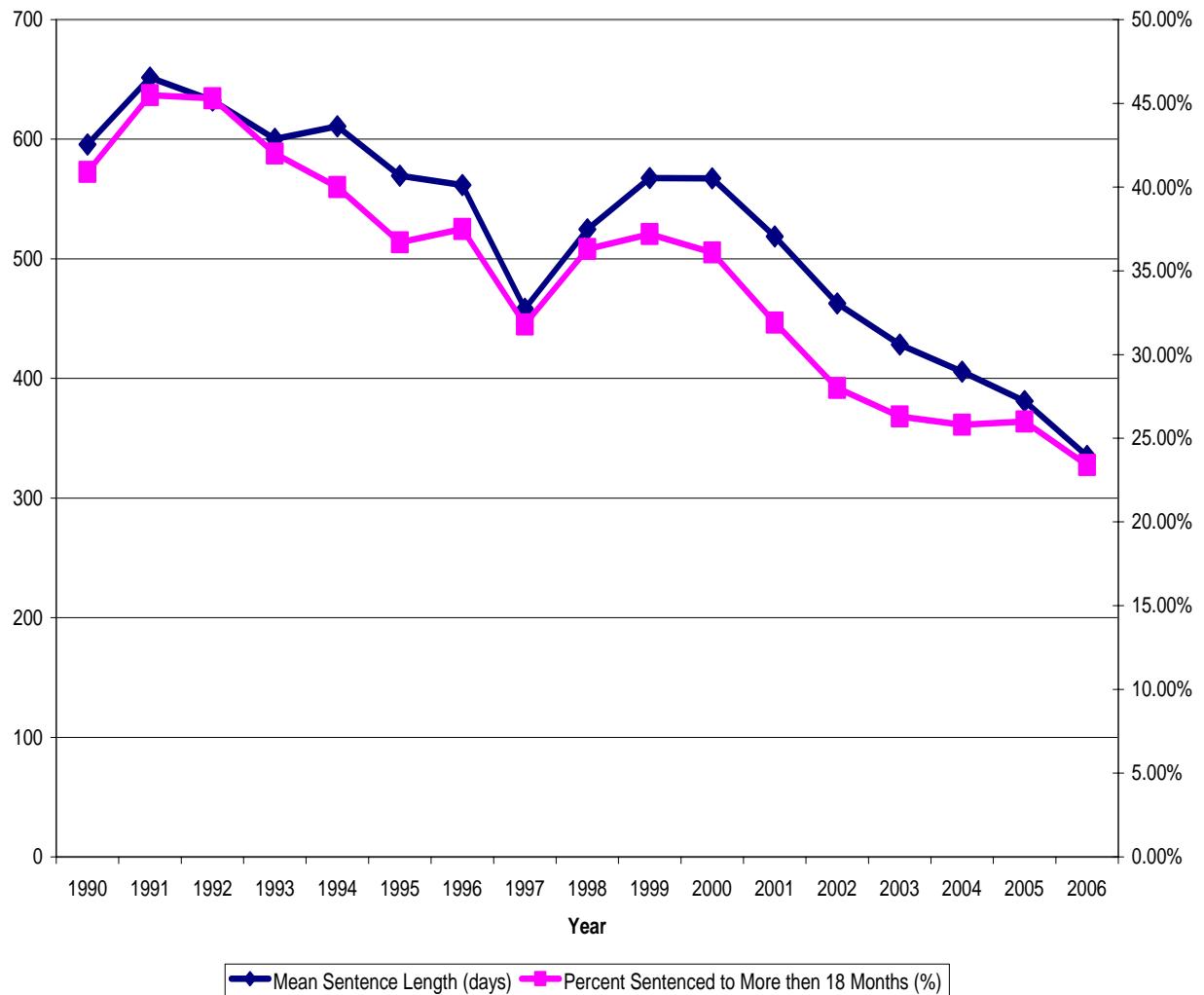
**Figure 4.11**  
**Convictions and Sentences for drug offenses, 1990-2006**



**Source:** BfS (personal communication)

Sentences also tend to be fairly short. As shown in Figure 4.12, in no year was the average length higher than 18 months and it has been declining since 2000; in 2006 the figure was less than one year. The fraction receiving more than 18 months has steadily declined over the entire period from roughly four in nine to less than one quarter.

**Figure 4.12**  
**Average Length of Sentences and percentage greater than 18 months**



**Source:** BfS (personal communication)

Pretrial detention, in which an arrestee is detained while waiting for disposition of charges, is a source of incarceration that gets little attention. However as Figure 4.13

shows, it accounts for a non-trivial share of the total. Many more individuals spent time in jail pre-trial than receive custodial sentences post-trial (3,114 compared to 1,884 in 2006), though of course the average time is shorter. This implies that a substantial number of those who spend time in jail are never sentenced to incarceration and do not show up in the prison statistics as drug offenders. Little is known about who receives pretrial detention, in particular whether a non-Swiss citizen is more likely than a Swiss citizen to be locked up before the disposition of his case.

**Figure 4.13**  
**Number and length of pre-trial detentions for drug offenses, and share of detainees not subsequently sentenced to incarceration 1990-2006**

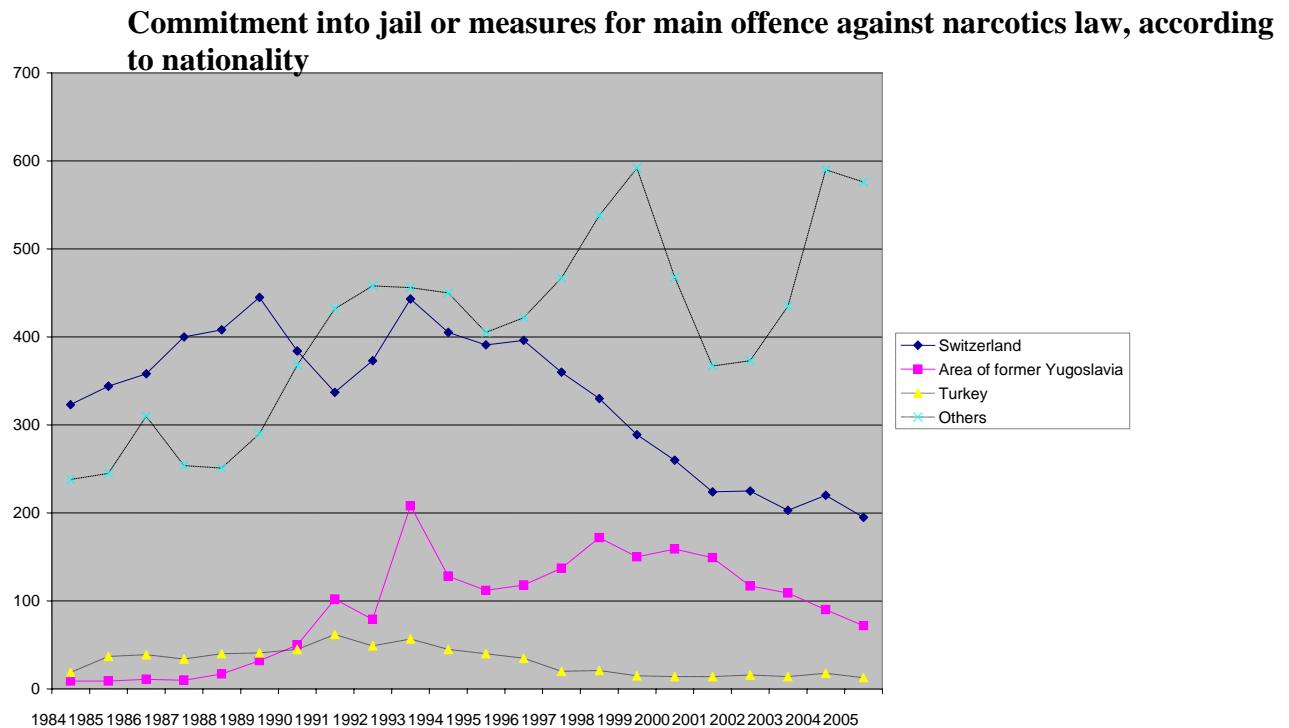


**Source:** BfS (personal communication)

Of those incarcerated for drug offenses, the vast majority for selling rather than possession, most were not Swiss citizens. The share of all drug prisoners that were not Swiss citizens has risen sharply since the mid-1990s. Figure 4.14 also shows that the

share from the former Yugoslavia, which was substantial at the time of the conflict in that region has now fallen greatly.

**Figure 4.14**



**Source:** BfS (personal communication)

## Seizures

The police also make substantial seizures of cocaine and heroin each year and have also occasionally seized large quantities of cannabis. Data for the three drugs is presented in Table 4.2. The cocaine and heroin series are noisy, as is true in most countries, because a small number of large seizures account for a high fraction of the total. It is not clear, for example, that much should be made of the fact that heroin seizures doubled from 1997 to 1998 or even that cocaine seizures fell sharply for the three years 2001-2003 and then rose to a new height for the period 2005-2007.

The cannabis seizure series may have more information in it because it is not dominated by a small number of large seizures. From 2002 to 2006 the quantity seized fell sharply each year, so that the 2006 figure was scarcely 12% of that for 2002; the

upturn in 2007 still produced a seizure figure lower than any other from 1997 to 2005. This decline in recent years may represent the diminution of open sale and use of cannabis as the fate of the initiative for reducing the restrictions on cannabis was resolved negatively; that appears to have led to more discreet behavior on the part of users and sellers. Moreover, the police started targeting open hemp selling around 2004.

It is also useful to assess the scale of seizures against the size of the market. This can be done for heroin, using international figures on typical per user annual consumption discussed in Paoli, Greenfield and Reuter (2009). Applying their figure of 30 grams of pure heroin per user to the 22,000 estimated heroin dependent users for 2002, the most recent year for which an estimate is available (Table 2.4), total consumption would be 660 kilograms. Using the average seizure of the three year period 2001-2003 to remove noise associated with single year figures, 245 kilograms, it appears that the police seize more than one quarter of shipments targeted<sup>18</sup> at heroin users in Switzerland. Though every element of this calculation is speculative, particularly the per user estimate<sup>19</sup>, it does suggest that enforcement against heroin markets may impose substantial costs on dealers. Some of the decline in heroin seizures may represent the falling number of heroin addicts, from a mean estimate of 29,000 in 1994 to 22,000 in 2002.

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<sup>18</sup> Seizures of 245, divided by the sum of consumption (660) and seizures (245).

<sup>19</sup> No studies report average pure heroin consumption by heroin users outside of treatment studies. The Paoli, Greenfield and Reuter figure is based on a small number of studies of use by treatment clients concerning the period before they entered treatment. The figure is likely to be sensitive to price but there is no systematic information that would allow specific adjustment for Switzerland in 2002.

**Table 4.2**  
**Seizures of Cocaine, Heroin and Cannabis, 1997-2006 (kilograms)**

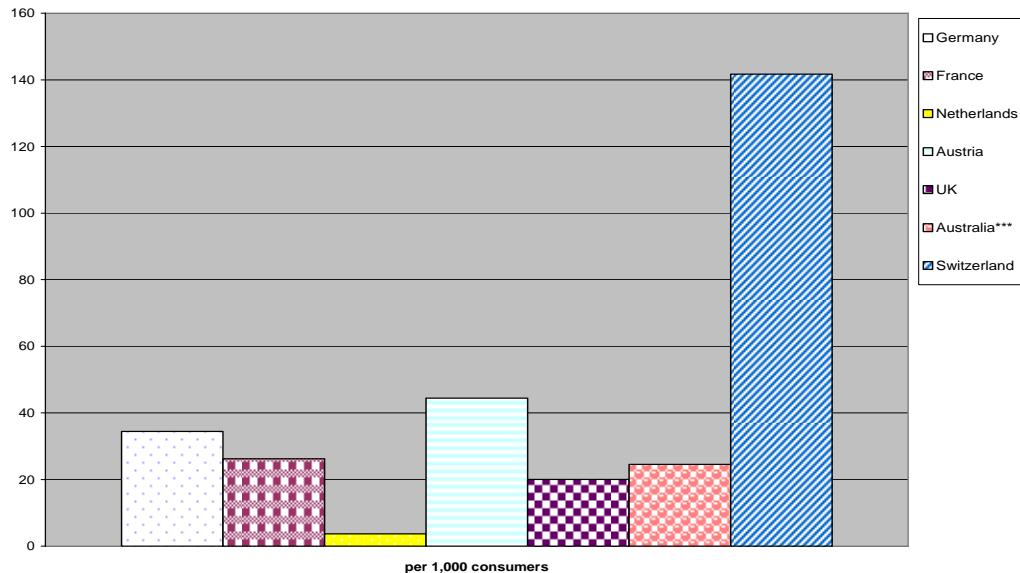
	Cocaine	Heroin	Cannabis
1997	349	209	7,283
1998	251	404	15,001
1999	288	398	8,459
2000	207	372	19,572
2001	169	228	11,424
2002	186	209	23,211
2003	189	300	13,356
2004	361	178	6,179
2005	283	256	4,898
2006	354	231	2,694
2007	404	135	4,015

**Source:** Fedpol

#### **Cross-national comparisons of cannabis enforcement**

Cannabis dominates Swiss policing of drugs, though it may account for a small share of serious prosecutions and incarceration. To gain a sense of the intensity of Swiss cannabis enforcement, we made comparisons between Switzerland and a number of other countries with high rates of cannabis use. We compared rates with two different bases; total number of past-year cannabis users (Figure 4.15), as measured by the closest available population survey, and the total population (Figure 4.16). Both comparisons should be taken as approximations because, as noted in Chapter 2, there are differences in methods used in the population surveys; e.g., nations that use in-person surveys will capture a higher share of actual use than those that rely on phone interviews. Moreover, the documentation of the criminal justice statistics are also not so clear that we are certain that the same measure (charge, arrest, person) is being counted in each country. The very low figures for the Netherlands reflects the 1970s decision in that country to end prosecution of those in possession of small amounts of cannabis.

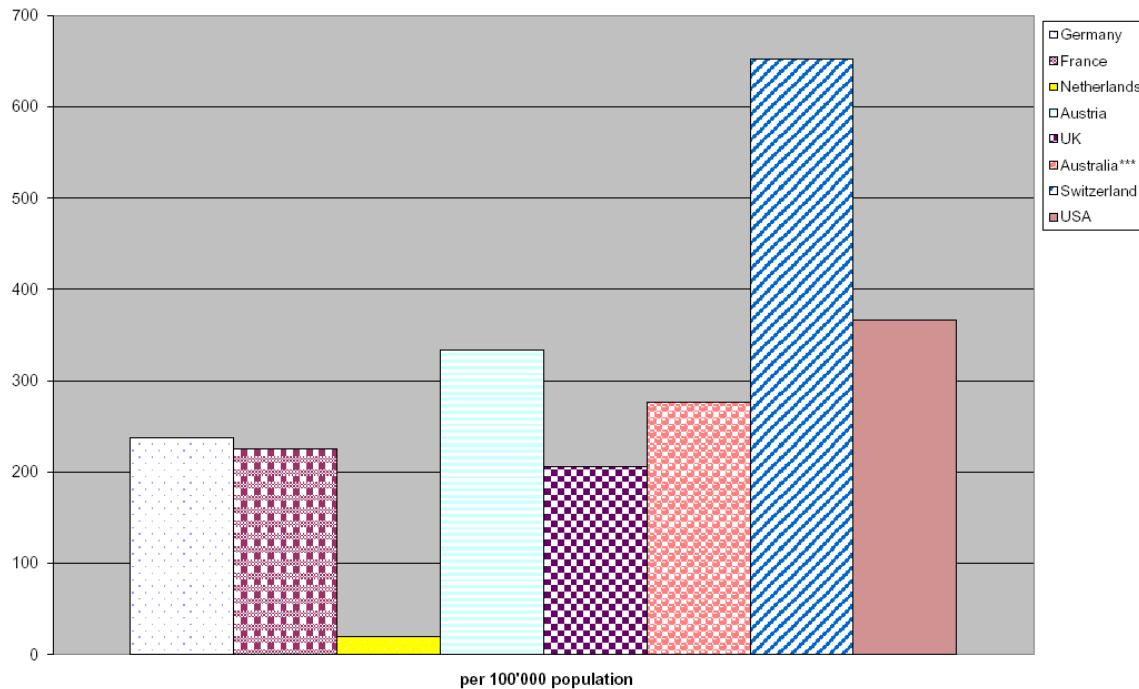
**Figure 4.15**  
**Rate of arrest for cannabis possession per 1,000 consumers (15- to 64 years old)**



**Source:** EMCDDA (<http://stats06.emcdda.europa.eu/en/elements/dlofig03a-en.html>), BfS (personal communication), Australian Institute of Health and Welfare (2007), statistics on drug use in Australia 2006, Canberra: AIHW cat. no. PHE 80 (<http://www.aihw.gov.au/>).

With these caveats, it nonetheless appears that Switzerland has a very high arrest rate for cannabis possession by both measures. The arrest rate measured against the number of users is particularly striking; Switzerland appears to have a rate that at about 14%) is more than twice as high as the next highest country (Austria). However we think that this may reflect an underestimate of the estimated number of past year users; as noted in Chapter 2, though there are many indicators of high rates of cannabis use among youth relative to other European countries, the broadest national survey of adults produces quite low rates of population use compared to those same countries. Thus more attention should be given to the comparisons in Figure 4.16. What is interesting to note here is the very similar rates for the five of the other comparator countries, all except the Netherlands; the rate falls between 200 and 320 per 100,000 population.

**Figure 4.16**  
**Rate of arrest for cannabis possession per 100,000 population (15- to 64 years old)**



**Source:** EMCDDA (<http://stats06.emcdda.europa.eu/en/elements/dlofig03a-en.html>), BfS (personal communication), Australian Institute of Health and Welfare (2007), statistics on drug use in Australia 2006, Canberra: AIHW cat. no. PHE 80 (<http://www.aihw.gov.au/>).

### Concluding Comments

One measure of outcomes is notably missing in this analysis, namely the price of drugs. Effective enforcement should make drugs more expensive and harder to obtain. The only available price series (themselves unofficial) report the highest and lowest prices observed by the police for each drug each year. These ranges are so broad as to have little information in them. For example, the range for cocaine in 1996 was 70-250 CHF and in 2005 was 50-200 CHF. Even though both the high and low figures had moved down, it is impossible to assess whether the average price had changed, particularly since purity is not reported. In reporting elsewhere, statements have been made that the price of heroin and cocaine have fallen substantially over the long-term but specific figures could not be obtained. Declines for cocaine and heroin have been

reported over various periods for many western European countries and for the United States.<sup>20</sup>

Thus the most basic measures of the effectiveness of drug law enforcement are missing. The incarceration rate of dealers is probably low, given the size of the heroin using population. However it may well be that the goal of enforcement is to keep dealing from creating disorder and public disturbance, in which case high incarceration risk for dealing is not a good measure.

The high percentage of incarcerations accounted for by non-Swiss citizens is on its face troubling. In other countries there is evidence of drug enforcement that has disparate impact on marginal groups. For example, Home Office figures show that 14% of those arrested for drug offences in England and Wales in 2003/4 were of black ethnic origin though black people were only about 2% of the English and Welsh population. Furthermore, those black people who were arrested were less likely to be cautioned and more likely to be charged, sentenced and imprisoned than their white counterparts. The result was that black persons were 14 times more likely than white to be incarcerated for drug offenses (Reuter and Stevens, 2007).

We obtained no information that enabled us to assess whether there was disparate impact of sentencing of foreign born drug offenders in Switzerland. As noted previously, in many Western countries immigrants from transshipment countries have a prominent role in the importation of cocaine and heroin (Paoli and Reuter, 2008). The sentencing data may reflect no more than effective policing in which the criminal justice system appropriately deals with a population of offenders that includes many foreign born. However the much higher rate of incarceration of this group deserves further analysis to assure that the law is indeed being applied equitably.

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<sup>20</sup> For Western Europe, price data can be found at <http://www.emcdda.europa.eu/stats08/ppfig1>. For the United States price data through 2007 are presented in ONDCP (2009).

## Chapter 5

### *Policy Analysis*

The previous chapters have described a range of problems that have declined considerably between 1998 and 2007. Cannabis use, after rising sharply among youth over a fifteen year period, has suddenly fallen sharply in roughly the second half of this decade. The epidemic of new heroin use came to an end in the early 1990s and there is no sign of a re-initiation of that epidemic, even though the price of heroin may have fallen substantially; the number of heroin addicts is steadily declining and an increasing share of them are in treatment. Frequent use of cocaine seems to be largely confined to the population that was previously heavily involved with heroin. Open drug scenes largely disappeared. It is worth noting though that the large gains were most attained by the year 2000; since then there has been more stability than marked improvement.

During this same period there was considerable continuity in policy. Heroin Assisted Therapy became a routine part of treatment but the numbers enrolled did not increase much; methadone maintenance enrollment actually began declining recently but this should be seen in the context of a reduced population of users dependent on heroin, so that treatment penetration may actually be rising, as it did from 1994 to 2002. Harm reduction programs expanded modestly in terms of services and locations. The police became still more aggressive in their enforcement activities against cannabis while heroin arrests declined sharply. Incarceration numbers, which probably matter more, hardly changed.

This characterization of Swiss drug policy is arguably superficial. There may have been improvements in implementation that are not captured here. For example, it is possible that prevention programs became more effective or that the police developed better tactics for their enforcement activities. However there is no specific indication of such improvements.

Moreover the trajectory of policy does not fit all that well with the change in drug problems. For example, there has been no specific change in cannabis policies around 2004 that might account for the abrupt downward turn in cannabis use rates among youth. This was a time when an ambiguity in policy toward cannabis was resolved; a strong

movement for relaxing laws governing both the possession and distribution of cannabis was defeated. Observers agree that this changed attitudes in the general population, as well as reflecting popular concerns that had been increased by evidence of rising THC content of cannabis. For example the open smoking of cannabis joints in public transport became much less common. However it is hard to describe this as a change in policy as opposed to a change in population attitudes. Arrests and penalties for cannabis use did not change, though the police did close hemp shops that had become very open in distributing cannabis, reflecting uncertainty about potential policy change.

If it is correct that policy as practiced did not change much, why was there an improvement in Switzerland's drug problems? The answer is that many factors other than policy make a difference in both how many individuals use drugs and in the way in which drug problems manifest themselves. That is not to say that policy is unimportant but that its effects are captured not at the most easily-measured levels of numbers of users or even of Problem Drug Users (PDUs), the term preferred by the European Monitoring Center on Drugs and Drug Abuse. The effects are most likely to be found at the much more difficult-to-measure level of reduced consequences of adverse effects both on users and society.

Since a large share of all users of drugs in the general population use only cannabis, variations in cannabis prevalence are a good indicator of drug use generally. The experience of other countries shows that large shifts in prevalence of cannabis use in particular can occur in a relatively few years. For example, in the United States, past month cannabis use among 18-25 year olds fell from 35.4% in 1979 to 21.8% in 1985 and then to a low of 11.1% in 1993; by 1999 it had risen 16.4% (Johnson, Bachman and O'Malley, 2003). There are no changes in policy or law that have been offered to explain these large changes.

Moreover the end of the heroin epidemic and the aging of heroin addicts since 1995 in Switzerland is also a phenomenon that has been observed in the United States, albeit 20 years earlier. Even with a sharp decline in prices over a long period, there has

been no reigniting of the heroin epidemic since the mid-1970s and the U.S. heroin population continues to age.<sup>21</sup>

The following section makes more detailed comparisons with other countries to increase understanding of how much changes in recent years in Switzerland might be attributed to policy choices.

### ***Comparisons with other Western Countries***

Cannabis use has become normative behavior in many Western countries. That is to say in countries such as Australia, Britain, Canada and the United States, roughly half of the population of those born since about 1970 or 1980 (depending on the country) has tried the drug at least once. In this company, Switzerland is among the highest but does not stand out from others.

. There is a good deal of evidence that cannabis use among youth has declined in recent years. For most Western countries that decline started between 1998 and 2002. Switzerland is late in that respect. However the reductions in Switzerland have been relatively large.

The strongest data for cross-country comparison come from ESPAD, the school based survey, since the same methodology is used in all countries. For the United States we use Monitoring the Future (MTF) for 10<sup>th</sup> grade students, who are roughly 16 years old; the MTF questionnaire is similar to that in ESPAD, as are the data collection procedures. The results are shown below, using the 2003 ESPAD data and the MTF of the same year since the 2007 ESPAD data are not yet published for most countries.

Focusing on lifetime prevalence among this age group (which is not very different from current use, because they are so young<sup>22</sup>), Switzerland has the second highest rate, behind the Czech Republic and just a little more than the France, the United Kingdom and the United States. Given the potential differences in population characteristics (e.g. willingness to report illegal behaviors) it is better to think of this set of five countries as

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<sup>21</sup> This can be seen for example in the Drug Abuse Warning Network, which tracked the number of admissions to Emergency Departments related to specific drugs. For heroin the share over the age of 35 increased from 47% in 1990 to 57% in 2002, the final year the system operated in a consistent fashion.

<sup>22</sup> For example, in the HBSC survey of 2006, 65.8% of 15 year old boys reported use of the cannabis in the previous twelve months. Only 9.8% reported that they had used the drug some time in their life but not in the past 12 months.

forming a single high rate group rather than focusing on the relatively small differences between them. This group has notably higher rates than three of Switzerland's near-neighbors (Germany, Italy and the Netherlands), each of which in turn has a much higher rate than Sweden or Poland.

For this age group, the prevalence of other illicit drugs in Switzerland is lower than in the other nations in that group. Switzerland's youthful cannabis users have used the drug more often than those in any other country but again the differences with the other high rate countries are quite modest, hardly of public health or policy significance.

**Table 5.1**  
**Lifetime drug use among 15-16 year olds in 12 European countries and the USA (2003)**

	Cannabis, % used	Cannabis, mean times per student	Cannabis, mean times per user	Any other illicit drug %
Czech Republic	44	7.3	16.6	11
France	38	7.3	19.2	7
Germany	27	4.4	16.3	10
Italy	27	4.9	18.1	8
Netherlands	28	5.0	17.9	6
Poland	18	2.2	12.2	7
Russia	22	2.1	9.5	4
Spain	36	-		9
Sweden	7	0.2	2.9	3
<b>Switzerland</b>	<b>40</b>	<b>8.4</b>	<b>21.0</b>	<b>6</b>
Turkey	4	0.6	15.0	3
United Kingdom	38	7.6	20.0	9
USA	36	7.5	20.8	20

**Source:** [www.espad.org](http://www.espad.org); Johnston, O'Malley and Bachman (2003)

It is also possible make comparisons of prevalence of drug use in the broader category 15-39. The comparison is not as close, as there are substantial differences in methods used (phone, in-person, mail) and in the wording of questions. These can have substantial effects. Nonetheless the comparisons are worth considering. Table 5.2 gives lifetime prevalence figures, which is the only measure available for all the countries; as noted in Chapter 2 it is a lagging indicator. Switzerland is no longer one of the leading

countries for cannabis prevalence; note that in this instance, the datedness of the Swiss survey relative to those of other nations would make it look higher, given that Swiss rates were generally declining at this time.

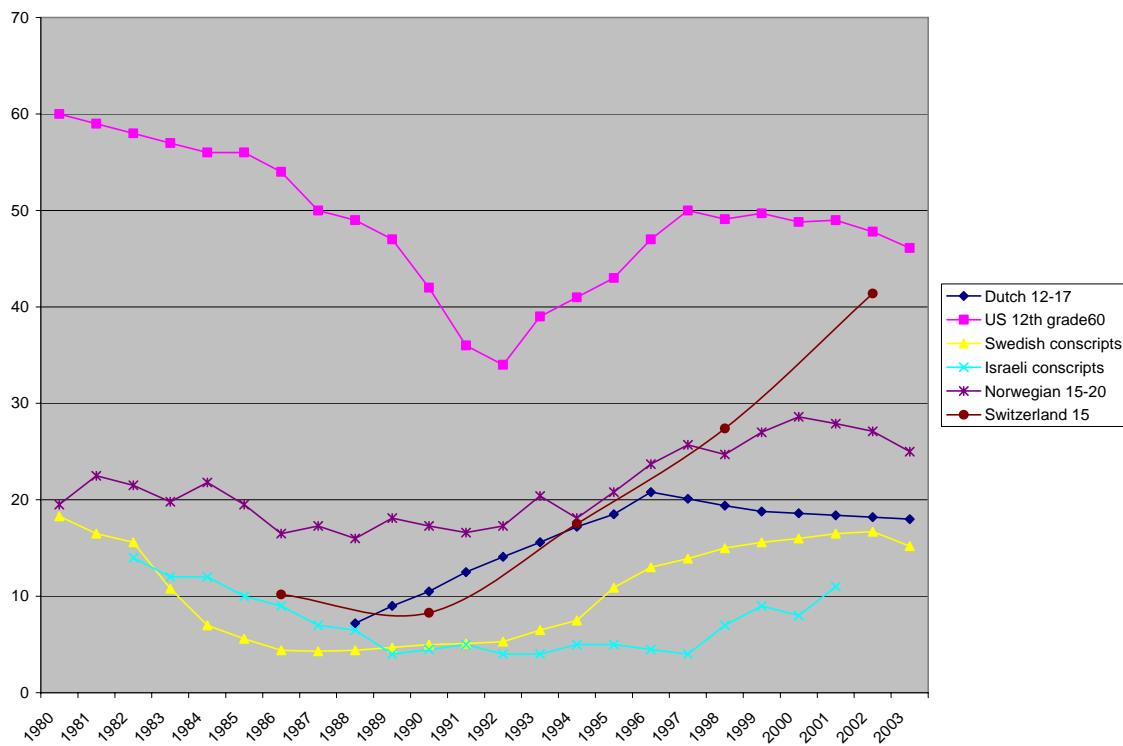
**Table 5.2**  
**Lifetime Prevalence of Cannabis use, aged 15-39, 8 nations, ca. 2005**

	Year of study	Cannabis	Cocaine	Ecstasy
Denmark	2005	49.5	9.1	5.3
Germany	2006	37.5	4.9	5.6
Netherlands	2005	32.3	4.9	8.1
Portugal	2007	17.0	2.8	2.6
Sweden	2004 (cannabis 2006)	19.1	0.8	0.6
<i>Switzerland</i>	2002	27.7	2.9	2.2
United Kingdom (England & Wales)	2006/7	41.4	12.7	13.0
United States	2005	47.7	13.6	10.5

**Source:** Various household surveys

Figure 5.1 shows the trends in cannabis use in different countries for youth in varying age ranges. The purpose is not to compare absolute levels but to suggest that the trajectory is similar to that recently observed in Switzerland. Though this pattern is by no means universal there are many countries for which there was a sustained upturn through much of the 1990s and then at least a stabilization if not decline near the end of the decade suggests that popular culture may be an important influence. Certainly it is difficult to identify any policy intervention that is common across these countries; a more extended discussion can be found in Room et al, 2008).

**Figure 5.1**  
**Changes over time in youthful cannabis use, Life Time Prevalence in 6 countries**



**Source:** various surveys

#### *The aging of the heroin dependent population*

Nordt and Stohler (2006) present evidence on the trajectories of heroin epidemics, as measured by incidence, in three other countries in comparison to Switzerland. For Australia, England and Italy the published data show a much less sharp downturn in incidence of heroin use at any point during the period 1980-2000. Indeed, for Australia, which suffered a severe heroin epidemic in the 1990s, there was no downturn before the supply side intervention that led to the “heroin drought” that began suddenly at the end of 2000. We supplement Nordt and Stohler’s data by offering evidence from treatment data that similar patterns have been observed in other countries.

The Netherlands experienced a sudden upsurge of heroin use in the 1970s (with many non-natives involved) but very low rates of initiation since 1980. Thus in 1989 the median age of those in treatment in Amsterdam was 32; in 2002 the median age had risen

to 43. (National Drug Monitor 2003). The United States shows a similar pattern in terms of age, even though that nation has a much lower share of heroin addicts in treatment and is much more aggressive in use of incarceration against the heroin dependent.

The United Kingdom offers a contrast. The epidemic lasted perhaps twenty five years, with estimated incidence rates rising almost continually throughout that period (Reuter and Stevens, 2007). As a consequence it is hardly surprising that the median age of those entering treatment for heroin dependence are much younger (30 in 2004) than their Swiss, Dutch or U.S. counterparts.

What might explain this pattern? Thirty five years ago Hunt (1974) developed a model that predicted just this sudden rise and decline. The underlying behavioral model has been well exposited by Kleiman (1992). When an addictive drug first becomes available, what is most conspicuous is its attractive qualities. Those who try it are enthusiasts for the drug and persuade friends to try it, so that initiation rates rise rapidly just as they do in an epidemic of influenza. At some stage the negative effects of the drug become more prominent. This has two effects. First, some current users become less enthusiastic about promoting it to their friends. Second, more non-users are aware of the negative effects; more of the “non-infected” become “inoculated”, to continue the epidemic analogy. This is the spirit of models developed in recent years by Jonathan Caulkins and colleagues.<sup>23</sup>

The test for policy during the upturn in an epidemic is whether it can (1) reduce the number who initiate in the course of an epidemic or (2) the percentage who go from experimentation to regular use. To achieve the first goal the government might create programs that alert those of high risk of initiation to the dangers of heroin which could lead to the epidemic of initiation peaking at a lower level or peaking earlier and/or accelerating the speed of the downturn. To achieve the second goal the government might try to reach current users of heroin with tertiary prevention programs.

Given that the downturn in heroin initiation in Switzerland was around 1990, attention has to focus on interventions around that time; those in the early 1990s might not have influenced the timing of the decline but might have increased its speed. Heroin

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<sup>23</sup> For a brief overview of their work see Caulkins (2007). A technical example is Caulkins et al., 2004. The work is most developed for cocaine, for which better data have been available in the U.S.

Assisted Treatment could not have made a difference since it did not become fully operational till 1994 and the numbers enrolled were slight. Moreover, as a program dealing with chronic heroin users, it does not directly affect initiation. It would only do so to the extent that it led to a reduction in drug selling activity, since so many of the HAT clients were themselves previously active sellers as well as users, selling in order to finance their own illicit consumption. This effect was observed in one of the studies conducted during the heroin trials (Killias and Aebi, 2000) but the numbers entering HAT were probably too small for that to account for a major decline in availability.

Descriptions provided in other documents (e.g. von Aarburg and Stauffbacher, 2004) indicate that the late 1980s and the early 1990s were an era of intense police pressure against the open drug scenes in which heroin was distributed. Zurich's Platzspitz, the most prominent and large open drug market, condoned by the police though without any explicit regulation, was closed at the end of 1991. It was replaced by a small market in the "Letten" area nearby; that was effectively closed by the end of 1993, following long efforts by the police. During this period numerous programs were started that provided a variety of services (some harm reduction, some prevention) to current users.

The open air scenes included both experienced users and curious experimenters. It is entirely possible that their closing did have an effect on initiation rates but there is no convincing design that would allow an identification of that specific linkage.

Hence the effect of policy on the timing of the downturn in heroin initiation cannot be assessed. What needs to be assessed is the effects of policy since then, which are aimed less at the initiation rate than at (1) accelerating desistance and (2) reducing the adverse consequences for those who continue to use and to the communities around them.

While again it is impossible to provide even a rough quantitative assessment of the gains achieved by policy in Switzerland in these respects, since the mid-1990s, what can be said is that there has been no hesitation to try plausible innovations, to collect data as to their effects and to make decisions on the basis of those data. That has been less true outside of the German speaking cantons, where there continue to be resistance in particular to harm reduction programs.

## **Concluding Comments**

A principal goal of this study was to assess the success of interventions aimed at reducing drug problems in Switzerland. The assessment of harm reduction programs should be in terms of their own goals, namely improving the health and social functioning of those who continue to use, and reducing the damage they cause others. The continued monitoring of HAT participants indicate that the gains observed in the initial trials continue; a population of dependent heroin users at great risk of high rates of relapse, blood borne disease and crime are doing better in terms of health and crime outcomes. The much larger MMT population also benefits in the same way. Drug Consumption Rooms may well have contributed to the declines in DRDs and drug related HIV.

Drug problems have a long trajectory. No democratic country has managed to shrink its heroin problem rapidly. It is hard to identify programs that have proven effective in other countries in dealing with a heroin problem that are not operating in Switzerland. Given that heroin has been by far the most problematic drug for the nation, that is an indication of a responsive and effective policy implementation.

With respect to cannabis, the other principal topic of policy making in Switzerland, the assessment has to be more cautious. Though cannabis use is decreasing in many countries, it is unclear that any nation has found interventions that have contributed to this. This raises a question about the desirability of the high rates of cannabis possession arrests in Switzerland. In a legal system that, unlike the Netherlands and the U.K., does not allow police to use discretion, it is hard to avoid high arrest levels without legal change. Swiss policy makers have considered reducing the stringency of penalties for cannabis possession but public opinion has not been supportive. It is not clear that there are any other policy options that would make a difference in that respect.

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