REPRINT

The 1990-91 Budget:
Perspectives and Issues

A Series of Drug-Related Pieces:

Drug Use in California
Anti-Drug Programs in California
Drug Prevention Programs

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Drug Use in California

How Widespread Is Drug Use? What Are the Characteristics of Heavy Drug Users?

Summary

Drug use among the general population has been decreasing since 1979. Specifically, the number of "current users" declined 40 percent between 1979 and 1988. Over the same period, however, several indicators of heavy use have increased. This suggests that the drug-using population can be categorized into two main groups--casual users, whose numbers have been decreasing, and heavy users, whose numbers have been increasing. Available information also indicates that youth who are heavy users of illicit drugs have many more social and behavioral problems than youth who use only alcohol or who only experiment with drugs or than those who abstain. In addition, about three-fourths of all arrestees (all types of crimes) tested positive for drugs.

Alcohol consumption nationwide has also been decreasing since 1979, but at a much more gradual rate. Consumption in California has experienced a similar decline, but residents of the state still drink 21 percent more than the nationwide average. Of the U.S. population 14 years and older, one-third do not drink alcohol, one-third are light drinkers, and one-third are moderate to heavy drinkers. Ten percent of the drinkers account for half of the alcohol consumed.

For the past several years, drug use and abuse has been one of the most prominent issues in the country. The public's interest in and concern about the subject has been heightened by the current federal "war on drugs." While the national focus has been on *illicit* drugs like cocaine and heroin, the most commonly used drug in our society is alcohol. To assist the Legislature in

thinking about and responding to issues relating to both alcohol and drug use, we have prepared three related pieces on the subject.

In *this* analysis, the first of the three pieces, we review national and California-specific estimates of drug and alcohol use and describe use among the two populations that have generated the greatest concern--youths and heavy users. In the following two pieces we (1) describe the state's current alcohol- and drug-related programs and how they would be affected by the proposed federal National Drug Control Strategy and (2) review and analyze the available research on alcohol and drug *prevention* programs and discuss the implications of our findings for California's prevention programs.

DRUG USE

In this section we review various estimates of the use of illicit drugs (such as marijuana, cocaine, and hallucinogens) and the nonmedical use of prescription drugs (such as stimulants and tranquilizers). It is difficult to measure the extent of drug usage, for two main reasons. First, given the illegality of illicit drugs, users are reluctant to identify themselves. In addition, many drug users--especially heavy users--are homeless, unemployed, or both, and therefore are difficult to locate and count. As a result, no one knows precisely how many people use illicit drugs. The estimates that are available rely on surveys. Below, we provide information on the illicit drug-using population based on the most reliable surveys available.

DRUG USE AMONG THE GENERAL POPULATION

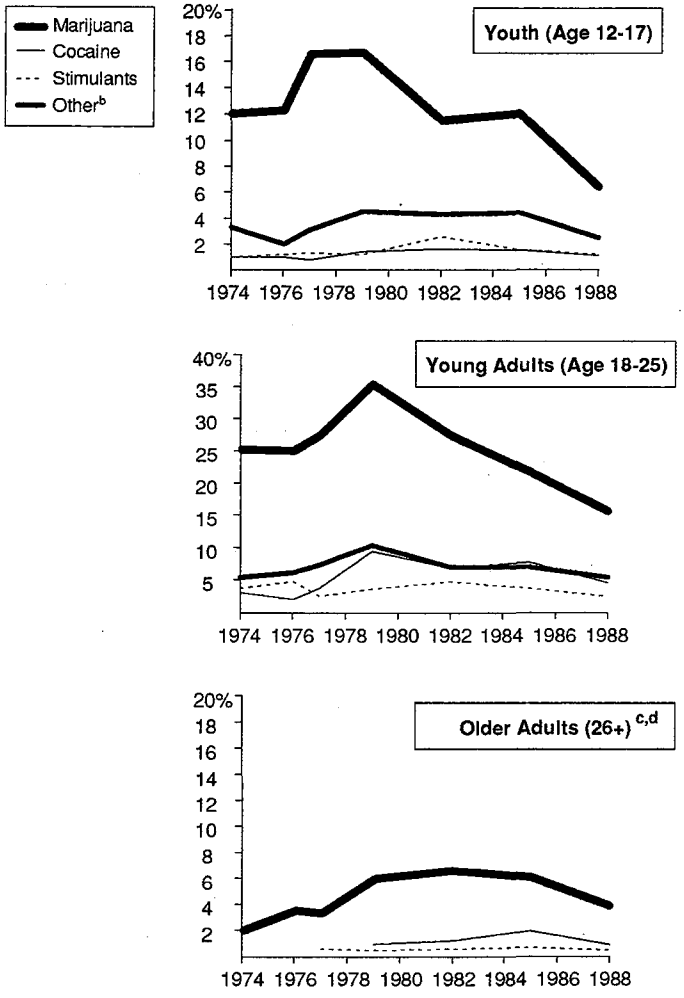
Drug Use Has Been Declining Nationally Since 1979

The National Institute on Drug Abuse (NIDA) has surveyed American households regularly since 1971 in order to estimate drug use in the United States. The NIDA survey is generally regarded as the best estimate of drug use among the general population. It does not, however, provide state-level estimates. Figure 1 displays NIDA's estimates of the prevalence of drug use among three different age groups, from 1974 to 1988. Overall, the percentage of individuals who use drugs has been declining since 1979. As the figure shows, there have been dramatic decreases (over 50 percent) in the use of marijuana by youths and young adults since that time, accompanied by much smaller declines in the usage of most other drugs in recent years. The upswing in cocaine use in 1985 by adults (18 and older) corresponds roughly to the emergence of crack cocaine. Historically, when a new drug

Figure 1

Drug Use Has Decreased for All Age Groups

Prevalence of Current Drug Use, 1974-1988 [a]



[a] A current drug user is defined as an individual who had used drugs at least once in the month prior to the survey.

[b] "Other Drugs" include tranquilizers, hallucinogens, psychotherapeutics, analgesics, and sedatives.

[c] No values are graphed for stimulants before 1977 or for cocaine before 1979 since the responses were too low to give an estimate which would be statistically significant.

[d] For older adults, the values for "other drugs" are not graphed since the survey only received significant values for 1976 (5.0 percent), 1977 (6.0 percent), 1985 (2.5 percent), and 1988 (1.3 percent). The values for the other years were too low to give an estimate which would be statistically significant.

Source: NIDA Capsules, Overview of the 1988 National Household Survey on Drug Abuse, National Institute on Drug Abuse.

is introduced into society, its use increases initially, then decreases over time.

The NIDA also reports that drug use declined in all age categories; among both men and women; in all regions of the country; for all levels of education; and for blacks, whites, and Hispanics. Overall, the 1988 NIDA survey found that 14.5 million people, or 7 percent of those surveyed, used drugs at least once during the month prior to the survey. This was a 40 percent reduction since 1979.

America's Drug of Choice Is Marijuana. Figure 1 shows that by far the most commonly used drug for all age groups is marijuana. The second most prevalent drug for adults ages 18 and over is cocaine. Although it is not shown on the graph (due to gaps in survey data), the second most commonly used drugs for youths are inhalants, such as glue, amyl, and butyl nitrates. Lastly, NIDA estimates that many of the 14.5 million current drug users use more than one of the drugs identified in Figure 1.

Experimentation With Drugs Is Common and Significantly More Prevalent Than Regular Use

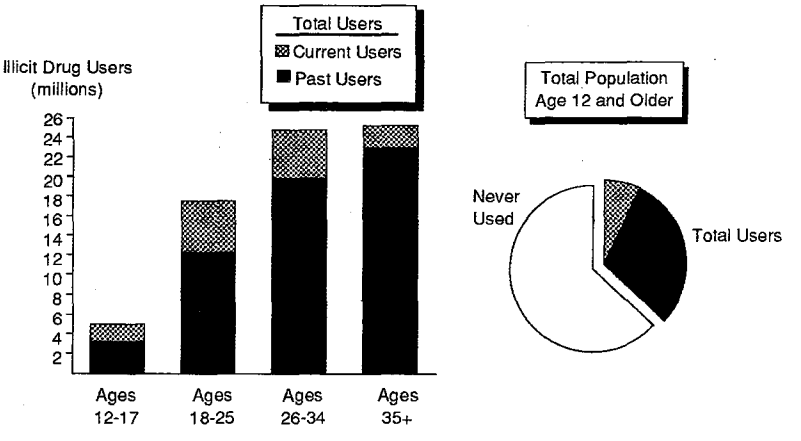
Figure 2 shows the 1988 NIDA estimates of the number of *current* drug users--those who had used drugs at least once in the month prior to the survey--relative to the estimate of "past" users--those who have tried an illicit drug sometime during their lifetime but not in the past month. (The classification "current users" is generally regarded as a reasonable proxy for *regular* users, even though it includes a small number of individuals who had *first* tried a drug in the month prior to the survey.)

As the figure shows, the number of past users is substantially greater than the number of current drug users for all age groups. NIDA estimates that 72.5 million people, or 37 percent of the population age 12 and older, have tried some illicit drug at least once. As the pie figure shows, the 37 percent is comprised of 7 percent who are current users and 30 percent who have used a drug, but not in the past month. The greatest increase in use occurs between the ages of 18 and 25.

In general, this data indicates that over a third of the population has tried at least one drug, but only 20 percent of those who have tried drugs continue to use them. These current drug users are predominately adults; youth (ages 12-17) comprise only 13 percent of the total.

Figure 2

Illicit Drug Use: Current and Past Use 1988 National Population Estimates[a]



[a] Note: A current drug user is defined as an individual who had used a drug at least once in the month prior to when the survey was taken. A past user is an individual who has used a drug at least once, but not in the past month. The sum of the two (the length of the whole bar in the figure) equals "total users."

Source: Household Survey on Drug Abuse, 1988, National Institute on Drug Abuse.

Current Drug Use Varies Significantly Among Subgroups

The NIDA survey also identified subgroups that had a greater prevalence of use than in the general population. While the survey found that the overall current prevalence of illicit drug use was 7.3 percent, the rate for metropolitan areas was 9 percent. Current use among blacks (8.2 percent) and Hispanics (7.8 percent) was slightly higher than among whites (7.0 percent).

In general, women's drug usage was much lower than men's, although in the west current use was greater for women (11 percent) than men (9.3 percent). By region, women's use rate varied dramatically, ranging from 4 percent in the northeast and south to 6.1 percent in the north central region and to 11 percent in the west. In addition, NIDA estimates that 9 percent of women in the child-bearing years of 15-44 are current drug users. This is of special concern since pregnant women can seriously harm

their fetuses if they use drugs during pregnancy. We addressed the issue of substance-exposed infants in *The 1989-90 Budget: Perspectives and Issues* (please see page 250).

DRUG USE AMONG YOUTH

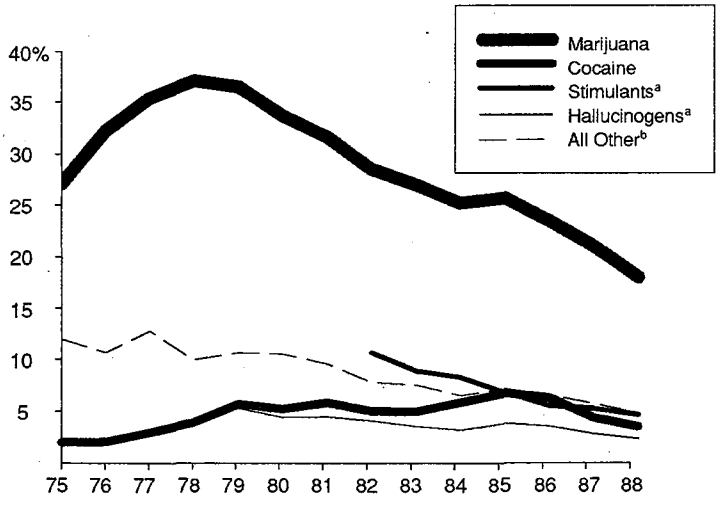
Use Among Youth Has Also Been Declining Since 1979

The major national study of drug use among youth is the National High School Senior Survey (NHSSS), conducted by the University of Michigan. Figure 3 shows the results of that survey since 1975. Like the NIDA data, this survey also shows that drug use among youths has been declining since 1979. As the figure indicates, usage declined significantly over the period for all drugs except cocaine, where usage peaked in 1985 and then fell in the following years.

Figure 3

Current Drug Use Among High School Seniors
National High School Senior Survey

1975-1988



[a] Note: Before 1982 for stimulants and 1979 for hallucinogens, different definitions for these drugs were used and thus those earlier values cannot be compared to the later values.

[b] Note: Includes heroin and other opiates, sedatives, and tranquilizers.

Source: Drug Use, Drinking, Smoking: National Survey Results from High School, College, and Young Adult Populations, University of Michigan, Institute for Social Research.

Another major study of drug use among youth is the series of surveys commissioned by the Attorney General of California in 1985-86, 1987-88, and 1989-90. The Attorney General's surveys covered 7th, 9th, and 11th grade California public school students. Like the surveys reviewed above, the Attorney General's survey found a substantial reduction in drug use from 1985-86 to 1987-88, including a decrease in daily users of marijuana from 7.4 percent to 4.3 percent of 11th grade students. The survey also found that most young people's first intoxication experience involves alcohol and, although drug experimentation can begin at an early age (for example, in 1987-88, 5.6 percent of 7th graders reported they had tried a drug by the 6th grade), most experimentation takes place between the 9th and 11th grades.

Youth Who Are "High-Risk" Users Have More Social Problems Than "Conventional" Users

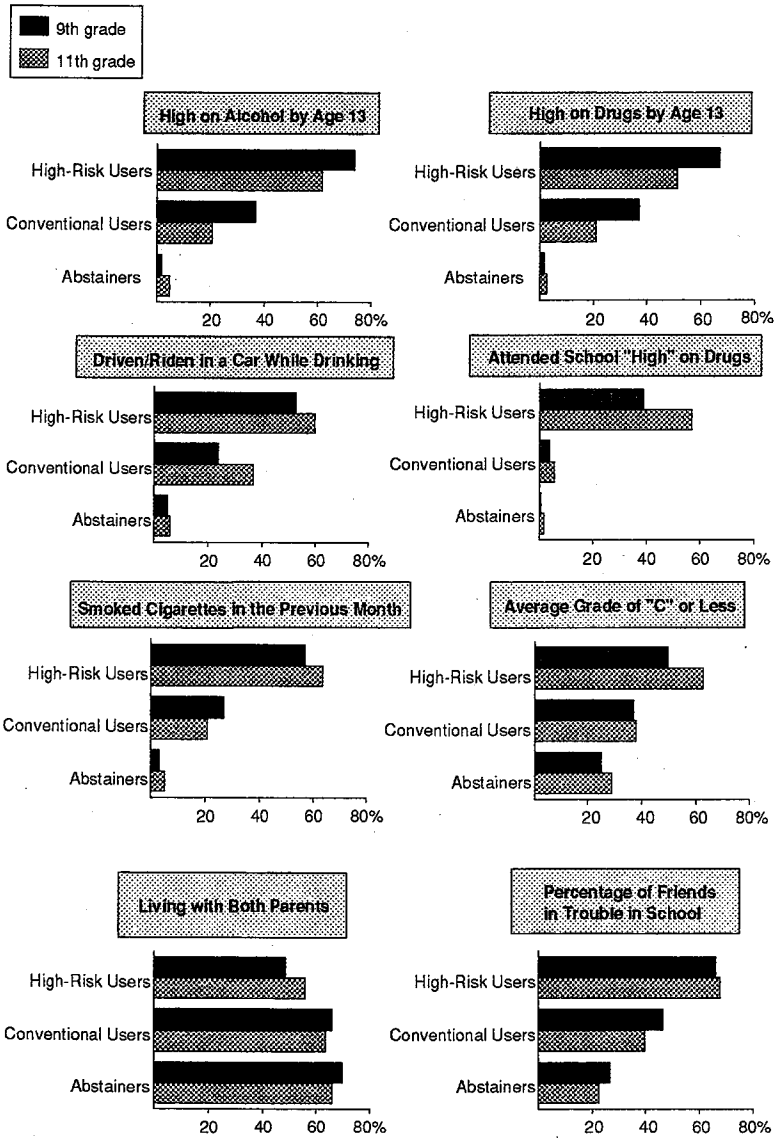
A report based on the Attorney General's survey provides separate estimates of "conventional" and "high-risk" users. High-risk users were defined as those who either (1) had used the less frequently tried and more dangerous drugs such as LSD or PCP, or (2) had used marijuana at least weekly, or (3) were polydrug users (including those who combined drugs and alcohol) on a number of occasions, or (4) had used cocaine. The survey identified 14 percent of 9th graders and 23 percent of 11th graders as high-risk users. However, with regard to the latter group, 60 percent of the 11th graders enrolled in continuation high schools were classified as high-risk users compared to 20 percent of regular high schools. The survey also identified 28 percent of the 9th graders and 19 percent of the 11th graders as abstainers (from alcohol and drugs) within the last six months and 57 percent of both 9th and 11th graders as "conventional" users.

Conventional users are defined as students who had used alcohol or drugs at least once in the past six months. The term "conventional user" was chosen since these students' use characterizes the use patterns of the majority of their peers. For example, conventional users were predominately those who had been intoxicated on alcohol at least once in the last six months. In general, conventional users used alcohol rather than illicit drugs and high-risk users used illicit drugs.

The survey found that there are significant differences in the characteristics of high-risk and conventional drug users. Figure 4 compares the characteristics of high-risk users with those of conventional users and abstainers. As the figure shows, high-risk users were less likely to live with both parents, tend to have lower grades, are more likely to have had earlier experiences with intoxication (age 13 or earlier), scored higher on measures of

Figure 4

California Public School Students Who Are "High-Risk Users" Differ from "Conventional Users" and Abstainers [a]



[a] Abstainers are defined as those who reported no use in the last six months.

Source: *Identifying High-Risk Substance Users in Grades 9 and 11, A Report Based on the 1987-88 California Substance Use Survey.* Rodney Skager, Sandra Firth, 1989.

school dropout potential, and more often engage in high-risk behavior, such as driving or riding in a car while drinking, smoking cigarettes, having friends who have gotten into trouble in school, and attending school while "high" on alcohol or drugs.

The survey also found that high-risk users were more likely to consider alcohol and drugs easy to obtain within their communities and to believe that students used drugs to have a good time or out of boredom. We discuss some of the policy implications of these differences in characteristics in our analysis of prevention programs (please see second following piece).

HEAVY DRUG USE

The National Surveys Are Poor Estimates of Heavy Use

While both the NIDA national household survey and the NHSSS provide reasonably good estimates of drug use among the general population, they miss certain segments of the population. Specifically, the NIDA survey does not include the homeless and persons living on military bases, in dormitories, or in other group quarters or institutions (such as hospitals and jails). The NHSSS only includes high school seniors and thus excludes dropouts. Therefore, these surveys may be missing some of the individuals who are most prone to heavy drug use.

For example, the NIDA survey does not give estimates for current heroin use since the responses it receives are too small to be significant. This is not surprising since heroin use is also considered to be one of the most deviant forms of drug use and therefore is less prevalent among the general population. Likewise, the NHSSS states that the effect of not surveying dropouts means its figures are low, but it estimates that the largest correction for most drugs, taking into account both dropouts and absentees, would be an increase of 7.5 percent. However, NHSSS states that, even with its corrections, it is unable to get a very accurate estimate for heroin use, and perhaps even for crack cocaine and PCP use, since these drugs represent the most deviant end of the drug-using spectrum. Therefore, the use of these drugs by dropouts may be much higher than their use by students who attend class.

Because of these methodological problems with the NIDA survey and the NHSSS, and because drug use by heavy drug users is a major public policy concern, it is important to examine other sources of data on this population. Below we summarize not only the NIDA estimates of heavy drug use but four other major sources of data on this population: The California Department of Alcohol and Drug Program's (DADP) estimate of "problem drug use," the Drug Abuse Warning Network (DAWN), the Drug Use

Forecasting (DUF) Program, and the DADP's California Drug Abuse Data System (CAL-DADS).

Heavy Drug Use: NIDA Survey Results Are Mixed

Until recently, NIDA did not ask any questions specifically about heavy drug use. In 1985, NIDA began to ask additional questions regarding heavy use of cocaine and marijuana, the most prevalent drugs. The NIDA reported in 1988 that the number of frequent users of marijuana declined by 28 percent from 1985. This decrease is not as steep as the decline in casual use, but is still substantial. On the other hand, although the number of current cocaine users *decreased* by 50 percent between 1985 and 1988, the number of heavy users--those who used cocaine at least once a week--*increased* by 33 percent (from 647,000 to 862,000). In addition, NIDA estimates that the number of daily, or almost daily, users of cocaine increased 19 percent between 1985 and 1988. The survey also found that, of the 2.9 million current cocaine users, almost 500,000 used crack cocaine. Thus, although current drug use and cocaine use declined in recent years, the heavy use of cocaine has increased.

The DADP Estimates There Are 2.1 Million Problem Drug Users in California

In 1983, the DADP contracted for a study to estimate the number of "problem drug users" in California. Problem drug users are defined as those who have smoked marijuana for 20 or more of the past 30 days, who have used opiates at least once in the past 30 days, or who have used any other drug (such as cocaine or hallucinogens) for nonmedical purposes for 5 or more of the past 30 days. Based on this study, the department estimated that, in 1986, there were 2.1 million problem drug users in California.

The department's estimate is frequently cited and it *does* suggest that there are a substantial number of problem drug users in California. However, even the department acknowledges that it is a very rough estimate. Moreover, because of the differences in how "problem users" and "heavy users" are defined by the DADP and NIDA, respectively, the department's estimate for California is *not* directly comparable to NIDA's national estimates.

Emergency Room Episodes and Drug-Related Deaths Have Greatly Increased During the 1980s

The DAWN collects data from hospitals and medical examiners on the number of times drugs are reported or mentioned in

emergency rooms in certain Standard Metropolitan Statistical Areas (SMSAs) throughout the United States. In California, three SMSAs are part of the DAWN system: Los Angeles, San Francisco, and San Diego.

Unlike the NIDA survey data, the DAWN data cannot be used to estimate the absolute number of heavy drug users. It does, however, provide a very good estimate of the *trends* in heavy use. In California, DAWN has recorded massive increases in emergency room admissions involving cocaine and therapeutic amphetamines (amphetamines, methamphetamine, etc.) since the early 1980s. Specifically, from 1983 to 1988, DAWN recorded the following increases in California:

- ***Cocaine.*** A 451 percent increase in emergency room episodes and a 457 percent increase in cocaine-related deaths.
- ***Therapeutic Amphetamines.*** A 157 percent increase in emergency room episodes and a 177 percent increase in therapeutic amphetamine-related deaths.
- ***Heroin/Morphine.*** A 122 percent increase in emergency room episodes and a 98 percent increase in heroin/morphine-related deaths.
- ***Marijuana.*** A 57 percent increase in emergency room episodes.

These data strongly suggest that there has been a large increase in the heavy use of cocaine and therapeutic amphetamines, with a smaller relative increase in heavy heroin/morphine and marijuana use. (The data did show a significant decrease of heavy use of one drug--PCP.) While the trends in heavy cocaine and amphetamine use reflected in the DAWN data may appear to contradict the declines in use by the general population reflected in the NIDA data, we believe that *both* estimates are valid. Specifically, the data suggest that casual or experimental drug use is substantially decreasing while heavy drug use is increasing.

Characteristics of Heavy Drug Users

Two other sources of data--the DUF Program and DADP's CAL-DADS--provide additional insights as to the characteristics of many heavy drug users.

Arrestees. The DUF Program conducts interviews and collects urine specimens from arrestees in large cities nationwide. Although the program is voluntary, over 90 percent of the arrestees asked to participate have given interviews and over 80

percent have provided urine specimens. The National Institute of Justice began the DUF Program in New York City in 1986 and has been expanding it ever since. There are three DUF sites in California: Los Angeles, San Diego, and a new one in Santa Clara.

Currently, there is information available on arrestees (all types--drug-related and nondrug-related) for the period January through March 1988. The data indicate dramatically high levels of drug use. For instance, the percentage of male arrestees testing positive for any drug (not including alcohol) ranged from a low of 58 percent in New Orleans to a high of 82 percent in New York City. Los Angeles registered 74 percent testing positive (64 percent, excluding marijuana) and San Diego, 79 percent (69 percent, excluding marijuana). Female arrestees, although much fewer in number, registered slightly higher values. In Los Angeles 79 percent tested positive for drugs (73 percent, excluding marijuana). (Data for females is not available for San Diego.)

Again, the figures above are for *all* arrestees, not just those arrested for a *drug* violation. For example, in Los Angeles 84 percent of the male arrestees whose major charge at the time of arrest was robbery tested positive for drugs. Similarly, 83 percent of those arrested for burglary, 77 percent for larceny, and 71 percent for stolen property tested positive for drugs. Figure 5 displays some of the characteristics of arrestees interviewed by the Los Angeles DUF Program.

Drug Treatment Clients. The DADP collects data through the CAL-DADS on drug treatment clients who are admitted to publicly funded treatment centers and private methadone clinics. This data also provides some insight into the characteristics of heavy drug users, although since the system includes private methadone providers, the data is somewhat more representative of heroin addicts than of other heavy drug users. Figure 6 shows the characteristics of drug treatment clients, based on the information collected on CAL-DADS.

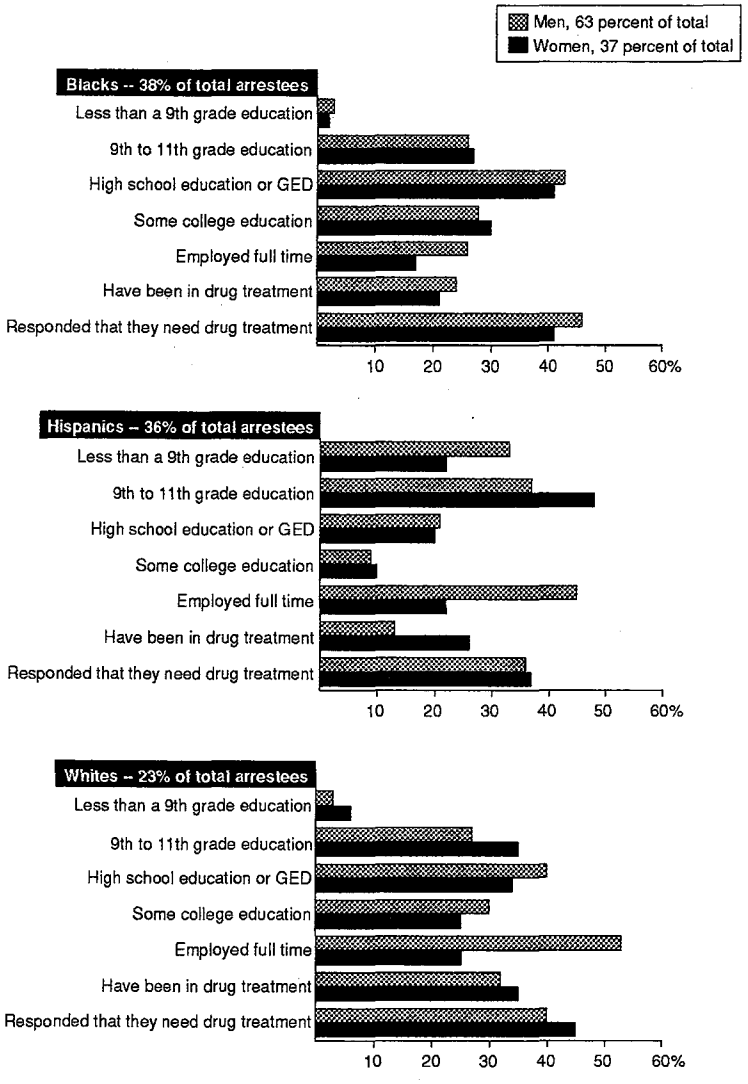
Taken together, Figures 5 and 6 provide a snapshot of the characteristics of two populations of heavy drug users: arrestees and treatment clients. The figures show that:

- ***Most Heavy Drug Users Have at Least a High School Education.*** Figure 5 shows that approximately 70 percent of black and white arrestees had at least a high school education. By comparison, only 30 percent of Hispanic males who are heavy drug users had at least a high school education.
- ***Heavy Drug Users Tend to Be Unemployed.*** The figures show that 71 percent of treatment clients are

Figure 5

Characteristics of Arrestees in Los Angeles County[a]

October 1987-August 1988



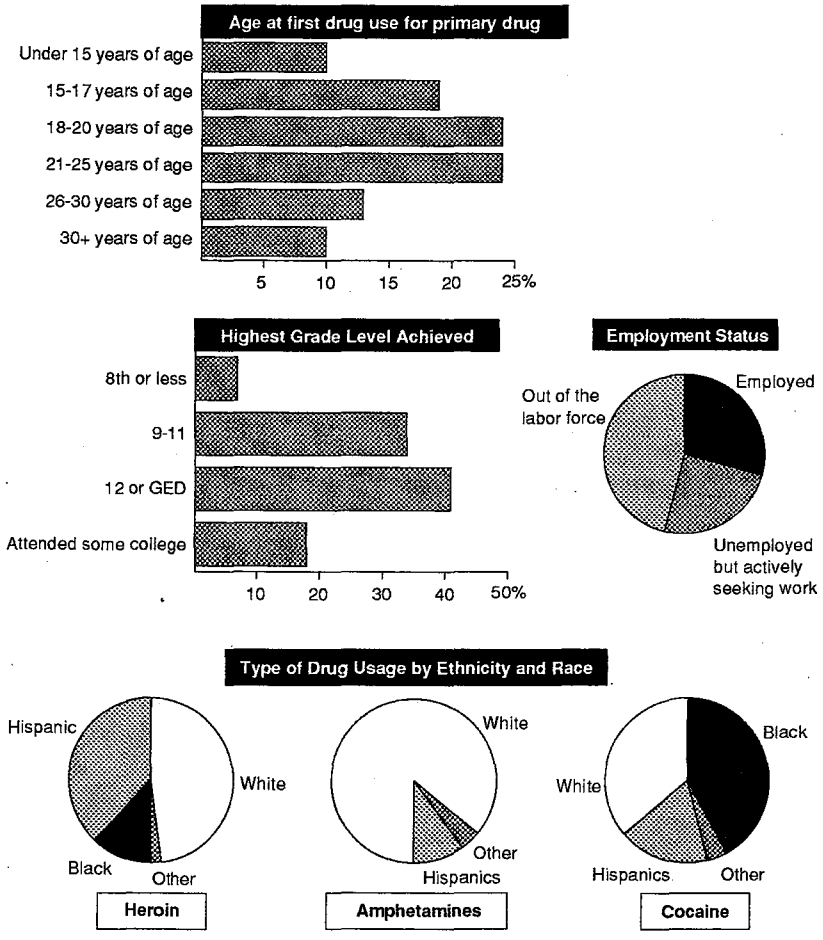
[a] Note: Not shown is the 3 percent of the arrestees who are not black, Hispanic, or white.

Source: *Annual Epidemiological Analysis of Los Angeles County Drug Use Forecasting Data,* UCLA Drug Abuse Information and Monitoring Project, April 1989.

Figure 6

Characteristics of Drug Treatment Clients

1988-89



Source: Department of Alcohol and Drug Programs.

either seeking work or are out of the labor market altogether. The arrestee data shows that about half of the white and Hispanic male arrestees were employed full time, as compared to one-fourth of black males.

- ***Drug Preferences Differ Substantially Along Ethnic and Racial Lines.*** Figure 6 shows that whites constitute 86 percent of the amphetamine users in drug treatment and only 36 percent of cocaine users. On the other hand, blacks were 42 percent of the cocaine treatment admissions and only 12 percent of the heroin admissions. Hispanics were a significant portion of the heroin admissions.

In addition to the information shown in Figure 6, treatment data from the DADP indicate that the primary drug of choice among addicts differs substantially along geographic lines. For example, in 1987-88 amphetamine admissions were concentrated in the counties of Riverside, San Bernardino, and San Diego and also made up a large proportion of the admissions in rural counties. On the other hand, 46 percent of all cocaine admissions were in Los Angeles County. The counties with the next highest cocaine admissions were Orange County with 11 percent and San Francisco County with 6 percent of statewide cocaine admissions.

SUMMARY

Many Americans have experimented with drugs, but most experimenters have not gone on to become regular users. Among the general population, illicit use of most drugs has been decreasing steadily for many years, although cocaine use has dropped only since 1985. However, indicators of heavy drug use--such as emergency room drug-related admissions--indicate that heavy use of drugs has been increasing for most of this decade. This suggests that the drug-using population consists of two distinct populations--casual users whose numbers have been decreasing and heavy users whose numbers have been increasing.

Drug use among youth, as among the general population, has also been steadily decreasing. Survey data suggest that youth who use drugs regularly or have tried the more dangerous drugs (such as cocaine) are significantly different from the youth who abstain from alcohol and drugs, only use alcohol, or who use drugs infrequently. These frequent drug users have social and behavioral problems (such as poor grades) and engage in more high-risk behavior (like attending school while "high" on drugs). Lastly, treatment and arrestee data indicate that most heavy drug users are unemployed and most arrestees are under the influence of an illegal substance.

ALCOHOL USE AND ALCOHOL-RELATED PROBLEMS

While alcohol is legal for adults, there are still serious societal problems caused by the *misuse* of alcohol (for example, alcoholism and alcohol consumption by pregnant women) and the *illegal use* of alcohol (for example, driving while intoxicated and the use by minors). Because of its legality, estimates of the amount of alcohol consumed are much more reliable than those for illicit drugs. In this part of the analysis, we review national and California-specific estimates of alcohol consumption as well as some of the data on alcohol-related problems. In addition, we describe alcohol use among youths and heavy drinkers.

ALCOHOL USE AMONG THE GENERAL POPULATION

Alcohol Consumption

As with drug use, per capita consumption of alcohol has been decreasing nationwide and in California since the late 1970s. The decrease in alcohol use, however, has been much more gradual than the decrease in drug use. Figure 7 shows California's consumption as compared to the rest of the nation for beer, wine, distilled spirits, and all alcoholic beverages. (Amounts are expressed in gallons of ethanol consumed, not in gallons of beverage consumed.) As the figure shows, California's per capita (age 14 and older) consumption of alcohol fell from 3.40 gallons in 1979 to 3.12 gallons in 1986 (the last year for which data are available)--a reduction of 8.2 percent.

Figure 7 also shows Californians drank 21 percent more alcohol per capita in 1986 than Americans nationwide, with most of the difference due to wine consumption. In 1986, Californians drank wine at twice the national per capita rate.

ALCOHOL USE AMONG YOUTH

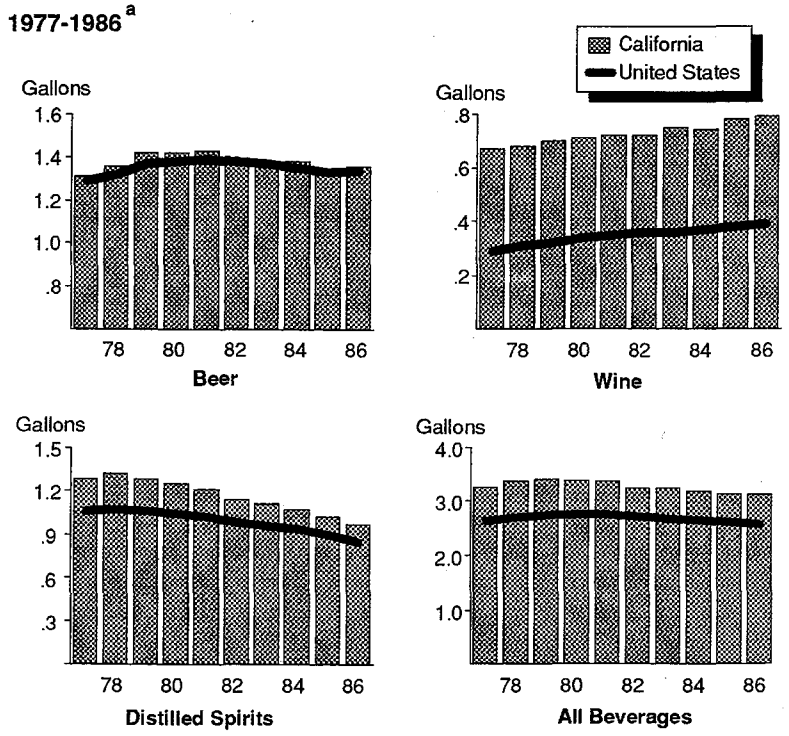
Alcohol Use Among Youth Has Declined Only Slightly

The NHSSS reports only a slight decrease in alcohol use among high school seniors. Figure 8 shows the use of alcohol from 1975 to 1988 for this group. For all three categories--use within the past 30 days, 5 or more drinks in a row in one sitting within the past 2 weeks, and daily use--the survey found very slight gradual decreases. From 1979 to 1988, use within the past 30 days decreased from 72 percent to 64 percent, the number having 5 or more drinks in a row within the past 2 weeks decreased from 41 percent to 35 percent, and daily use decreased from 6.9 percent to 4.2 percent.

Figure 7

Annual Per Capita Consumption of Alcohol in Alcoholic Beverages, U.S. and California

1977-1986 [a]



[a] The per capita values are based on the population age 14 or older. Volumes are in gallons of ethanol consumed (not total liquid).

Source: Center for Disease Control, 1989.

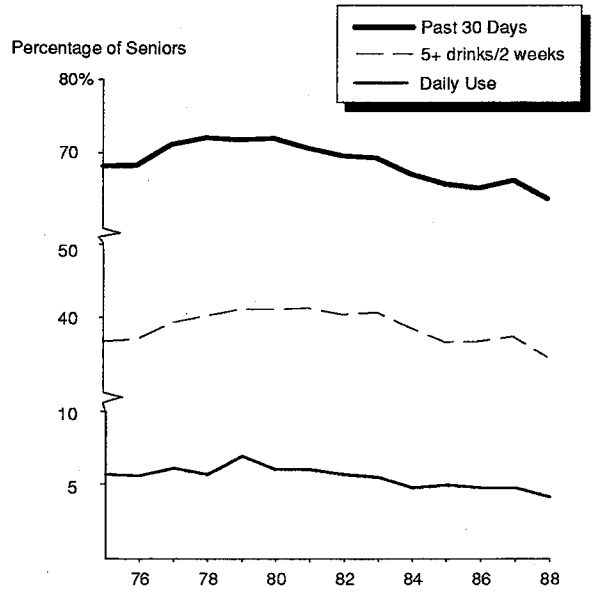
Experimentation Begins at an Early Age

The Attorney General's survey of California's students found that experimentation with alcohol begins at a substantially earlier age than does experimentation with illicit drugs. The survey reported that, in 1987-88, 46 percent of the 7th graders surveyed had tried alcohol at least once by the time they had reached the 6th grade. However, only 10 percent of them had been intoxicated at least once by that time. By comparison, 40 percent of 11th graders had been drunk at least once by the 9th

Figure 8

Alcohol Use Among High School Seniors
National High School Senior Survey

1975 through 1988



Source: Drug Use, Drinking, Smoking: National Survey Results from High School, College, and Young Adult Populations, University of Michigan, Institute for Social Research.

grade and 62 percent by the 11th grade. Interestingly, only 64 percent of 7th graders said they thought their parents were "strongly against" their use of alcohol. This number dropped to 47 percent for 11th graders.

HEAVY ALCOHOL USE AND ALCOHOL-RELATED PROBLEMS

Ten Percent of Drinkers Responsible for Half of Total Consumption

In 1987, the National Institute on Alcohol Abuse and Alcoholism (NIAAA) estimated that there were 18 million adults 18 years of age and older who experienced problems such as loss of

memory, inability to stop drinking until intoxicated, inability to cut down on drinking, binge drinking, and withdrawal symptoms. The NIAAA defines persons with such dependent symptoms as alcoholics.

In addition, based on information from various studies, the NIAAA estimates that approximately one-third of the U.S. population age 18 and over are abstainers, one-third are light drinkers, and one-third are moderate to heavy drinkers. Although two-thirds of the adult population drink, consumption of alcohol is very unevenly distributed among the drinking population. NIAAA estimates that 10 percent of the drinkers, or 6.5 percent of the U.S. adult population, account for one-half of all the alcohol consumed in the nation.

Heavy Alcohol Use Is Significantly Higher Among Certain Subgroups

As we saw in drug use, there are racial, ethnic, and gender differences in alcohol use. The NIAAA reports that, with respect to gender, alcohol use differs as follows:

- Among all age groups, more men than women are drinkers, and of those who drink, there are significantly more heavy drinkers among men than among women. For example, among 18-29 year olds, NIAAA estimates that 81 percent of men are drinkers versus 73 percent of women. In this age group, 28 percent of the men are heavy drinkers, whereas only 7 percent of the women are classified as heavy drinkers.
- Among Hispanics, almost half of Hispanic women are abstainers, but less than one-fourth of Hispanic men abstain.

The NIAAA also reports the following ethnic and racial differences in alcohol use:

- Hispanic men have a higher rate of alcohol use and abuse than the general population.
- Abstention from alcohol is more common among blacks than among whites; and in addition, black men who drink are less likely than white men who drink to be heavy drinkers.
- American Indians and Alaskan Natives appear to have very high rates of alcohol abuse and alcoholism. For instance, in 1979 American Indian hospital discharges involving alcohol-related illnesses and injuries were more than three times the rate of the general population. In

addition, the combined mortality rate from 1977 through 1979 for alcohol psychosis, alcoholism, and alcoholic cirrhosis of the liver was 57.3 per 100,000 American Indians and Alaskan Natives as compared to 7.4 per 100,000 for the overall population.

- Although alcohol use differs among Asian Americans of different origins, generally Asian Americans of both sexes drink significantly less than whites, blacks, or Hispanics.

Lastly, homeless persons are estimated to have a high rate of alcohol-related problems. For example, in 1988 the Rand Institute reported that 57 percent of the homeless in Alameda, Orange, and Yolo Counties had an alcohol abuse problem.

The data that the DADP collects on alcohol recovery clients is not as extensive as the data on drug treatment clients. For this reason, the department can only estimate the size and makeup of the clientele. The DADP estimates that for 1989-90, alcohol recovery clients are 78 percent male, 64 percent white, and 22 percent black, and predominantly between the ages of 25 and 44. Unlike the drug data, there is no information on their level of education or employment.

Alcohol-Related Problems Are Not Solely Confined to Heavy Users

A National Academy of Sciences report found that although the heaviest drinkers have the highest *rates* of alcohol-related problems, the larger number of light and moderate drinkers account for more of the total alcohol-related problems than heavy drinkers. As noted above, alcohol-related problems result in many different types of costs to individuals and society. For instance, during 1987, there were 45,533 alcohol-related motor vehicle accidents in the state that killed 2,754 Californians and injured 68,817. The number of people killed in alcohol-related motor vehicle accidents in California increased 14 percent between 1982 and 1987. About half of all the people killed--and one-fifth of the people injured--in motor vehicle accidents were in alcohol-related accidents.

In addition to traffic accidents, alcohol is a factor in many nontraffic injuries and deaths such as drownings, falls, fires, and suicides. The DADP estimates that from 20 percent to 25 percent of all hospital admissions are alcohol-related. Lastly, a pregnant woman can cause harm to her fetus if she consumes alcohol during her pregnancy. The DADP estimates that approximately 4,500 infants are born annually in California with either Fetal Alcohol Syndrome or Fetal Alcohol Effects, which are serious

medical and developmental conditions directly related to alcohol use.

Almost Half of All Convicted Persons Had Used Alcohol Prior to Committing Their Crime

A 1985 U.S. Department of Justice study sampled county prisons to find out how many prisoners had been under the influence of alcohol at the time of their criminal activity. The study estimated that 48 percent of convicted persons had used alcohol prior to committing their crimes. As was the case with the drug data presented earlier, alcohol was a factor in a wide variety of crimes, not just with infractions associated with alcohol consumption itself, such as public drunkenness or driving under the influence. For example, the study estimated that 54 percent of violent crimes and 40 percent of property crimes were performed under the influence of alcohol. If this national data is considered together with the DUF arrestee data presented earlier, it is clear that many crimes are committed under the influence of *both* drugs and alcohol.

SUMMARY

The consumption of alcohol has been decreasing, but at a much slower rate than drugs. As with drug use, alcohol is used by a large portion of the society, but at varying levels of use. Although two-thirds of the population drink alcohol, 10 percent of the drinkers consume half of all the alcohol.

Alcohol experimentation begins at an early age, much earlier than drug use. Although alcohol is illegal for teenagers, many students reported that they did not think their parents were strongly against their drinking it. Finally, the misuse of alcohol results in serious health and safety problems for both individuals and society.

Anti-Drug Programs in California

How Will the Recently Enacted Federal Drug Control Legislation Affect California's Drug Control Programs?

Summary

California will spend more than $1 billion (all funds) for anti-drug programs in the current year. Local expenditures, though difficult to quantify, are probably close to $2 billion. Of the amount spent by the state, almost 70 percent is for enforcement activities. The remainder is spent on the treatment, prevention, and research programs.

As a result of new federal legislation, California will receive a minimum of $100 million in additional federal grant funds available for expenditure beginning in 1989-90 to assist in the fight against substance abuse. The Governor's Budget provides little information on the administration's expenditure plan for these funds. In order for the Legislature to assess the direction of the state's anti-drug programs, the Department of Finance and specified state agencies should report to the Legislature, prior to budget hearings, on the proposed expenditure plan for these monies.

Background

In September 1989, President Bush proposed the first phase of a major new "National Drug Control Strategy," which included requests for federal funding for various anti-drug programs and proposals for changes in federal and state laws. Congress enacted the funding provisions of the strategy, and as a result, California will receive substantial increases in federal funds for anti-drug programs in the current and budget years. The additional funds provide the Legislature with an opportunity to assess California's current expenditures for various drug programs and more sharply focus the state's response to substance abuse.

In this analysis, we review the state's current efforts to control drug abuse through enforcement, treatment, prevention, and research programs. We then examine the changes in federal funding resulting from the President's National Drug Control Strategy. This analysis is designed to assist the Legislature as it considers the options and opportunities available to California as a result of the increased federal funding.

CALIFORNIA'S CURRENT ANTI-DRUG EFFORTS

In order to assess the possible uses of the increased federal funds, it is necessary to know what anti-drug programs currently operate in California, both at the state and local levels. We were able to identify most expenditures at the state level, but because of data limitations, were unable to quantify expenditures at the local government level. It should be noted that our discussion of state and local anti-drug programs includes programs designed to curb the use of both alcohol and other legal and illegal drugs.

State Anti-Drug Programs

Anti-drug programs at the state level can be grouped in one of four categories: *enforcement* programs, *prevention* programs, *treatment* programs, and *research* programs. The total funding levels for these programs in the current year are displayed in Figure 1. It indicates that the state will spend $940 million for anti-drug programs in 1989-90. (For reasons discussed below, this figure should be viewed as the *minimum* amount spent by the state. Actual expenditures are probably much greater.)

As the figure shows, enforcement of drug control laws represents the largest expenditure category for state programs. Federal funding is concentrated primarily in the treatment and prevention categories. In both cases, federal expenditures are

Figure 1

State Expenditures for Anti-Drug Programs

1989-90
(in millions)

Categories	Federal	State	Total
Enforcement	$19.3	$626.6	$645.9
Treatment	94.7	95.1	189.8
Prevention	51.1	39.3	90.4
Research	13.5	0.7	14.2
Total	$178.6	$761.7	$940.3

roughly equivalent to state expenditures. Federal funding provides the bulk of the drug research funding for the state but only a small portion of total spending for enforcement.

Figure 2 provides a detailed listing of the anti-drug programs summarized in Figure 1. Below, we highlight some of the major programs in each category.

Enforcement. We estimate that the state will spend about $646 million for enforcement of drug control laws in 1989-90. The cost of incarcerating drug offenders in state prisons ($501 million) far exceeds all the other identified expenditures in this category, representing about 78 percent of the total spending on enforcement. Drug offenses include possession, manufacture, sale or transportation of illegal drugs. Most of the programs in this category are related to direct enforcement of drug laws by state agencies.

The total enforcement amount includes only those costs *directly* identified as related to imprisonment of drug offenders. In addition, there are many other persons incarcerated for crimes committed as a result of substance abuse (such as burglary to support a heroin habit or assault and battery while under the influence of alcohol), the costs of which are *not* included in the total. We know that these types of crimes represent a large percentage of the total enforcement costs. For instance, 76 percent of state prison inmates have a history of substance abuse. In addition, data collected on a sample of arrestees in Los Angeles indicate that 74 percent of the males and 79 percent of the females tested positive for drugs.

There are also court-related costs which are not included in the enforcement totals of Figures 1 and 2, because these costs cannot be quantified. This is because it is impossible to determine the amount of time and work required by courts to try drug offenders. We do know, however, that the state will spend almost $630 million for court programs in the current year, with a sizeable portion of that amount attributable to drug offenses.

Treatment. The second highest category of state expenditures for anti-drug programs is treatment, with almost $190 million in 1989-90. Almost two-thirds of the state's expenditures for drug treatment is concentrated in the Department of Drug and Alcohol Programs (DADP). The DADP subvenes monies to county offices of alcohol and drug programs, which fund methadone detoxification and maintenance programs as well as alcohol recovery homes and drug-free outpatient and residential programs. In addition, the state funds several treatment programs for inmates, wards, and parolees through the Departments of Corrections and the Youth Authority.

Figure 2

State Anti-Drug Programs

1989-90
(in millions)

Department/Program	Description	Federal	State	Total
Enforcement Programs				
Corrections				
Incarceration and supervision	Incarceration and parole supervision of drug offenders.	--	$500.8	$500.8
Drug testing	Drug testing for parolees.	--	1.5	1.5
Youth Authority				
Incarceration and supervision	Incarceration and parole supervision of drug offenders.	--	34.0	34.0
Drug testing	Drug testing for parolees.	--	0.2	0.2
Justice				
Bureau of Narcotic Enforcement	Statewide law enforcement for narcotics dealers and clandestine drug manufacturers operating in multiple jurisdictions.	--	39.4	39.4
Asset Forfeiture	Seizure of assets earned by illegal narcotics activity.	--	0.2	0.2
Campaign Against Marijuana Planting (CAMP)	Coordination of multi-agency task force program to destroy marijuana.	$0.5	--	0.5
Judiciary				
Trial and appellate courts	Court proceedings for drug-related offenses.	--	Unknown	Unknown
Office of Criminal Justice Planning				
Anti-drug abuse grant programs	Local assistance to various criminal justice agencies for drug-related enforcement activities.	15.8	--	15.8
Marijuana eradication	Grants to selected counties for marijuana eradication and prosecution.	--	2.2	2.2
Major Narcotics Vendor Prosecution	Grant program to counties for support of prosecution in major drug cases.	--	2.8	2.8
Alcoholic Beverage Control				
Licensing and compliance	Licensing the sale of alcoholic beverages. Enforcement of licensing regulations.	--	22.5	22.5
Motor Vehicles				
Discretionary Driving Under the Influence (DUI) actions	Imposing and processing various discretionary actions relating to drivers with an identified substance abuse problem.	--	2.5	2.5
Various mandatory DUI actions	Processing of actions taken when drivers are convicted of of DUI of drugs or alcohol.	--	4.3	4.3

Department/Program	Description	Federal	State	Total
Enforcement Programs--CONTD				
California Highway Patrol				
Traffic management	DUI arrests, narcotics drug enforcement, public relations, drug influence recognition and eradication.	--	14.4	14.4
Office of Traffic Safety				
Community alcohol programs	Special DUI enforcement in 10 communities and a public awareness program. Program education and development.	0.7	0.7	1.4
Various programs	Training to law enforcement and the public, studies and pilot programs.	2.3	--	2.3
Commission on Peace Officers Standards and Training (POST)				
Peace officer training	Courses offered in the areas of alcohol and drug awareness and investigation.	--	0.3	0.3
Board of Corrections				
Peace officer training	Courses offered in the areas of alcohol and drug awareness and investigation.	--	0.6	0.6
Parks and Recreation				
Training	Drug and alcohol training for peace officers.	--	0.2	0.2
Total, Enforcement Programs		$19.3	$626.6	$645.9
Treatment Programs				
Alcohol and Drug Programs				
Various treatment programs	Programs include methadone detoxification and maintenance and alcohol detoxification programs.	$69.6	$51.6	$121.2
Health Services				
Medi-Cal	Heroin detoxification.	0.8	0.8	1.6
Medi-Cal	Health care related to drug and alcohol abuse.	Unknown	Unknown	Unknown
Medically Indigent Services Program	Funds health care related to drug and alcohol abuse, which is provided by counties.	Unknown	Unknown	Unknown
Perinatal substance abuse pilot programs	Funding for prenatal infant care and case management substance abusing mothers.	1.8	--	1.8
Social Services				
Various programs	Programs that target children in families with drug- or alcohol-abusing members, including court dependent and addicted babies.	0.1	2.1	2.2
Alcohol/drug abuse recovery or treatment facilities for adults	Licensing.	--	0.2	0.2

Department/Program	Description	Federal	State	Total
Treatment Programs--CONTD				
Rehabilitation				
Drug and alcohol programs	Basic vocational rehabilitation services to disabled individuals.	22.4	5.0	27.4
Corrections				
Treatment for paroles	Parole programs targeted to substance-abusing parolees.	--	14.2	14.2
Treatment for inmates	Prison programs targeted to substance-abusing inmates.	--	1.1	1.1
Youth Authority				
Treatment for wards	Educational and counseling services in camps and institutions.	--	15.8	15.8
Various				
Employee Assistance Programs	Drug and alcohol counseling for employees of state agencies and licensed professionals.	--	4.3	4.3
Total, Treatment Programs		$94.7	$95.1	$189.8
Prevention Programs				
Alcohol and Drug Programs				
Various prevention programs	Primarily local programs targeting specific groups, provided through county subvention process.	$25.7	$17.7	$43.4
Education				
Federal Drug Free Schools and Communities Act	Funds to school districts for drug and alcohol use prevention.	21.0	--	21.0
Higher Education				
Educational Courses	Various educational courses that cover the academic study of drug and alcohol abuse.	--	3.0	3.0
Drug and Alcohol Problem Management Consortia	Seven regional consortia projects provide information and technical assistance on developing and improving substance abuse programs at member institutions.	0.2	--	0.2
Office of Criminal Justice Planning				
Comprehensive Alcohol and Drug Prevention Education (CADPE)	Grant program provides funds to school districts for coordinated alcohol and drug prevention strategies among schools, law enforcement, and community organizations.	4.2	18.6	22.8
Total, Prevention Programs		$51.1	$39.3	$90.4

Department/Program	Description	Federal	State	Total
Research Programs				
University of California				
Alcohol and drug abuse programs	Numerous research projects related to substance abuse.	$12.9	$0.7	$13.6
Various state agencies				
Various research	Alcohol and drug-related.	0.6	--	0.6
Total, Research Programs		$13.5	$0.7	$14.2
Total, All State Anti-Drug Programs		***$176.6***	***$761.7***	***$940.3***

The state's Medi-Cal program provides assistance to thousands of low-income persons, many of whom suffer from medical problems resulting from alcohol or drug use. Expenditures for Medi-Cal services in the current year are about $7 billion, about half of which is from state funds and half from federal funds. Because of data limitations, it is not possible to quantify the portion of this amount that is devoted to this treatment. However, every 1 percent of total Medi-Cal expenditures which is devoted to treatment of persons for alcohol and drug-related health problems adds $70 million to the total amount in the treatment category.

In addition, the state currently spends about $400 million for the Medically Indigent Services Program (MISP), which provides funding to counties for health services for indigent persons. There is no data on the amount of MISP funding devoted to care and treatment of alcohol and drug-related health programs.

Prevention. Programs designed to prevent alcohol and drug use represent the third highest category of the state's anti-drug expenditures. About $90 million will be spent for these programs in the current year. These programs are administered primarily by three state agencies: the DADP, the State Department of Education (SDE), and the Office of Criminal Justice Planning (OCJP). The largest state expenditures in this category are for the programs administered by DADP ($43 million), which subvenes most of these funds to county offices of alcohol and drug programs. The OCJP provides prevention programs through its Comprehensive Alcohol and Drug Prevention Education (CADPE) program, while the SDE serves primarily as a conduit to local agencies for federal prevention funding. For a detailed discussion of the state's expenditures on prevention programs, see "Drug Prevention in California" following this analysis.

Research. Alcohol and drug research supported by the state is primarily conducted by the University of California. The bulk of this research, which totals $14 million in the current year, is supported by federal funds.

Local Anti-Drug Programs

In addition to federal and state funding for anti-drug programs (much of which is "passed through" to local governments), local entities also spend millions of dollars annually from their *own* revenues on anti-drug programs. In reviewing data on local spending, however, we found that it is not possible to identify all the funding sources and amounts for these programs. This is because anti-drug programs are generally part of a broader reporting category (for example, a local alcohol prevention program might be included in "public health" expenditures). It is possible, however, to offer some general comments on the categories in which local governments spend money for drug control.

Enforcement. Enforcement is also the largest segment of local government expenditures related to anti-drug efforts. Local governments bear the costs for enforcement of drug control laws through county sheriff's, county probation, and city police departments. These law enforcement agencies spend in excess of $5 billion per year statewide to investigate, make arrests, supervise, and incarcerate persons for all crimes. In 1988 nearly 30 percent of all arrests at the local level were for drug-related offenses. *If* the costs were strictly proportional to arrests, the total amount spent by local entities on enforcement costs would be about $1.5 billion.

In addition to the sheriff's, probation, and police expenditures related to drug control, local governments also bear the costs of prosecuting drug offenses and defending indigent defendants through the district attorney's and public defender's offices, respectively. The annual costs for these functions is over $600 million statewide, some sizeable portion of which can be attributed to cases related to substance abuse.

Treatment and Prevention. Other local agencies also bear major costs of drug treatment and prevention services. For example, when indigent substance abusers use a county hospital emergency room, or are admitted to a county hospital, it is often the local agency that absorbs the cost of treatment. In addition to the funds provided by the state, counties spend almost $1 billion in local health care and public health programs. An unknown portion of this amount is related to the effects of substance abuse. Counties also spend an unknown amount of their funds to provide follow-up care and other services (such as homeless shelters) for indigent substance abusers. Local agencies may also provide family counseling and support services to local residents who are victims of substance abuse. In addition, local school districts spend funds for school-based prevention and education programs that are not funded by the state and for the costs of supporting teachers to deliver drug and alcohol education curricula.

In summary, although we cannot precisely quantify the amount local agencies spend on anti-drug programs, the total could easily be close to, or in excess of, $2 billion.

THE NATIONAL DRUG CONTROL STRATEGY

The Bush Administration's strategy released in September was the first of a two-part plan. In the first phase, the president requested $7.9 billion in federal spending for various anti-drug programs. In late November, the Congress increased the president's request and appropriated a total of $8.8 billion for the programs. Although much of the additional funding is confined to federal programs (such as defense and federal prison programs), there are also substantial increases in grant funds available to states.

In this section, we describe the Bush Administration's recommendations for changes in state law, detail the additional federal funds that will be available to California, and provide an overview of the uncertainties about the plan that the Legislature may wish to monitor.

Suggested State Legislation

The Bush Administration recommended that states enact a variety of drug control statutes. Enactment of these statutes is not currently a *requirement* to receive additional federal money. In reviewing the National Drug Control Strategy, we found that the California Legislature has already enacted much of the recommended legislation.

Specifically, the President suggested that states adopt the following:

- ***Mandatory Sentences for Drug Offenses.*** These sentences would carry prison terms for serious drug crimes.
- ***Alternative Sentences for Some Offenses.*** These sentences would include a variety of penalties for drug offenses, including community service, house arrest, and work on environmental projects.
- ***Asset Forfeiture Laws.*** These laws allow confiscation of property that is presumed to be used in facilitating illegal drug transactions. The Administration suggested that states earmark the funds to law enforcement programs.
- ***Schoolyard Laws.*** These laws provide additional penalties for anyone selling or using drugs around a schoolyard or place frequented by children.

- ***Penalties for Drug Possession.*** These laws provide penalties for possession of even a small amount of illegal drugs, such as losing a driver's license.
- ***Drug-Free Workplace Statutes.*** The Administration recommends all state and municipal employers be required to take personnel action against employees found to be using drugs.

Our analysis indicates that most of the provisions suggested by the Bush Administration have already been enacted in California in some form. For instance, the state's determinate sentencing laws provide minimum prison sentences for many drug offenses. The state also has specific laws prohibiting certain drug activities near schools, and laws permitting forfeiture of assets earned as a result of illegal drug activities.

Federal Funding for California

The Congress appropriated additional monies for grant programs that are available to the states. Although the President originally proposed funding his National Drug Control Strategy by redirecting funds from State Legalization Impact Assistance Grants (SLIAG) under the federal Immigration Reform and Control Act, that proposal was rejected by Congress. Had the President's original proposal been enacted, it could have had a significant impact on California, which is estimated to receive almost $2 billion in SLIAG funds over an estimated five-year period.

There are three major federal grant programs that provide funds to states for drug programs: the Drug Control and System Improvement Formula Grant Program; Alcohol, Drug Abuse, and Mental Health Services Block Grant Program; and Drug Free Schools and Communities Block Grant Program. These grants are referred to as "formula" grants because they are allocated to the states on the basis of a formula that takes into account a state's population and other distinguishing characteristics. Of the total amount appropriated by the Congress for the federal plan, approximately $2.2 billion was provided for these various formula grants. Although some of the grants are used to support programs at the state level, the majority pass through state agencies and are spent at the local level.

We estimate that California will receive approximately $209 million for these grants in federal fiscal year (FFY) 1990 (October 1989 to September 1990), an increase of about $100 million, or 91 percent, above the amount provided in FFY 1989. The additional federal funding should be available for expenditure in both 1989-90 and 1990-91, the state fiscal years which overlap with FFY

1990. In some cases, the state will have as long as three years to spend the funds. Figure 3 compares the 1990 amounts for the three grants to the 1989 amount.

Figure 3

Federal Anti-Drug Funding for California

(dollars in millions)

Formula Grant Programs	FFY 1989[a]	FFY 1990[b]	Change
Drug Control and System Improvement	$10.8	$39.7	268%
Alcohol, Drug Abuse, and Mental Health Services (substance abuse portion only)	68.5	120.7	76
Drug Free Schools and Communities	30.0	48.4	61
Totals	$109.3	$208.8	91%

[a] October 1, 1988 through September 30, 1989.
[b] October 1, 1989 through September 30, 1990.

We provide details on the three grant programs below.

Drug Control and System Improvement Grants. California will receive $40 million in FFY 1990, an increase of 268 percent. These funds can be used for virtually any law enforcement function. Federal law requires the state to allocate 64 percent, ($25.5 million) to local law enforcement agencies and 36 percent ($14.1 million) for state agencies and administration.

The federal government made changes to this program when the new funds were appropriated. In the past, states were allowed to allocate up to 10 percent of the grant for administration of the program. This year, only 5 percent is allowed for administration.

We describe the Governor's proposals for use of these funds in our analysis of the OCJP in the *Analysis of the 1990-91 Budget Bill* (please see Item 8100).

Alcohol, Drug Abuse, and Mental Health Services (ADMS) Block Grants. We estimate that California's share of the ADMS Block Grants will be $140.1 million for FFY 1990, of which $120.7 million is for alcohol and drug abuse programs and $19.4 million is for mental health programs. This grant has a number of constraints on its use that require specific expenditure levels for particular program areas. For example, federal law requires that at least 35 percent of the block grant be used for alcohol programs and at least 35 percent for drug programs.

It is not clear whether additional constraints will be placed on these grant funds. At the time this analysis was prepared, there

were still several issues which were awaiting action in Congress. Among the items under discussion are how to allocate the funds, whether treatment programs should be required to show greater accountability, and whether additional portions of the grant should have categorical restrictions. This grant program is discussed in our analysis of the DADP in the *Analysis* (please see Item 4200).

Drug Free Schools and Communities Block Grant. Based on information furnished by the DADP, we estimate that California will receive approximately $48.4 million in federal grants under this program. About $35 million of these funds will go directly to the SDE, with the remaining funds being the "Governor's discretionary funds." In the current year, the Governor's discretionary funds are allocated to the DADP, OCJP, and the Department of the Youth Authority.

With the FFY 1990 appropriation, the grant was amended to create a new program to be funded out of the Governor's discretionary monies. Federal law requires that this new program provide funds to local education agencies at the discretion of the Governor. (Please see Item 6110 of the *Analysis* for our discussion of the SDE portion of these funds and Item 4200 for our discussion of the new Governor's discretionary funds.) At the time this analysis was prepared, no details were available on the new program.

Uncertainties About the Federal Program Remain

The second phase of the President's plan was released in late January 1990. Although the specific provisions of the second phase were not available at the time this analysis was prepared, it appears that the state and local governments could receive *even greater* federal funding in the budget year under the President's proposal. Los Angeles and certain parts of southern California may receive increased funding if designated as a high-intensity drug trafficking area.

Until Congress acts on the the second phase of the President's plan and all regulations are in place, it is impossible to predict what the final result will be. However, we do know that during the past year several changes in the grant requirements were considered, such as:

- Requiring drug testing of inmates and persons arrested for various crimes as a prerequisite to receiving federal criminal justice funds.
- Strengthening accountability requirements for drug and alcohol treatment and prevention programs.

- Requiring all states receiving federal drug funds to have a written state strategy.
- Requiring schools receiving substance abuse funds to develop plans and sanctions for drug-abusing faculty, students, and staff.

At this time, however, it is not clear whether any of these alternatives will be implemented as a requirement for receipt of federal funds.

Legislature Needs Information

We recommend that the Department of Finance, in conjunction with other state agencies, report to the Legislature prior to budget hearings on the administration's proposed expenditure plan for new federal drug control funds.

Based on the information presented above, we estimate that California will receive at least an additional $100 million in federal funds for expenditure in 1989-90 and 1990-91 for anti-drug programs. At this time, however, there is a lack of data on how the administration proposes to spend all of the additional money, and, more specifically, how much will actually be available for expenditure in the budget year. The Legislature needs information to determine whether the proposed expenditures of the increased federal funds is consistent with a balanced approach to substance abuse problems in California and meets the priorities of the Legislature.

In order to adequately address these issues, we believe the administration should provide the Legislature with a comprehensive plan of how it proposes to expend these funds. Accordingly, we recommend that the Department of Finance, in conjunction with the DADP, the SDE, the Department of Justice and the OCJP, report to the Legislature, prior to budget hearings, on its proposed expenditure plan for the additional federal funds. The report should provide information on new programs (their scope and function) as well as information on programs that will be expanded. The report should also note where federal grant money will be replacing existing state funds.

Drug Prevention Programs

How Can the Legislature Improve Its Strategy for Preventing Drug Problems?

Summary

The budget proposes to spend over $100 million in state and federal funds for educational and social services programs designed to prevent drug and alcohol abuse. More than one-half of this amount is for school-based programs. Our review of the research on substance abuse suggests that a relatively small subgroup of youths will go beyond experimentation to develop serious substance abuse problems. It therefore appears that drug abuse prevention strategies that focus primarily on discouraging experimental use are too broad-based in their approach. Moreover, these kinds of programs have been extensively evaluated and have not been shown to be effective. We therefore conclude that the best strategy for school-based programs would be to encourage school districts to emphasize programs that target "high-risk" youth.

Community-oriented prevention programs have not been rigorously evaluated. However, one promising approach, which is currently being used in the area of alcohol abuse, is community organization, which is designed to get communities involved in ridding their neighborhoods of environmental factors that contribute to substance abuse problems, such as high concentrations of bars and stores that sell alcoholic beverages. We therefore recommend that the Department of Alcohol and Drug Programs evaluate the current efforts in the alcohol field and help counties develop similar approaches with respect to other drugs.

In general, there is a great deal of uncertainty about what works and what does not work in the prevention field. We therefore recommend that the Legislature encourage programmatic experimentation at the local level and evaluation and information sharing at the state level.

INTRODUCTION

The Department of Alcohol and Drug Programs (DADP) estimates that in 1985 alcohol abuse cost California $11.7 billion and drug abuse $6.0 billion due to reduced productivity, increased mortality and morbidity, increased crimes and accidents, and increased needs for social services. For 1990-91, the budget proposes to spend approximately $100 million on substance abuse prevention programs. These programs provide a variety of educational and social services--such as classroom instruction, counseling, and community outreach--to prevent substance abuse by either (1) focusing on preventing the onset of use (primary prevention) or (2) stopping abuse before it leads to addiction (early intervention). Obviously, these programs do not represent all of California's efforts to prevent alcohol and drug problems. For example, they do not include alcohol and drug treatment programs, or law enforcement's efforts to reduce the supply of illicit drugs and to prosecute individuals who use illegal drugs or who use alcohol illegally (such as drunk drivers and underage drinkers).

In order to assist the Legislature in reviewing the social services and educational components of the state's overall strategy for preventing substance abuse, we have reviewed the research literature on the causes and consequences of substance abuse and the effectiveness of prevention programs. In this piece, the third of three pieces dealing with drugs and alcohol, we provide an overview of the state's prevention programs, review school-based and community-based prevention programs, and provide our recommendations for improving California's substance abuse prevention programs.

OVERVIEW OF CALIFORNIA'S PREVENTION PROGRAMS

Alcohol and drug prevention programs in California are administered by three different state departments--the DADP, the State Department of Education (SDE), and the Office of Criminal Justice Planning (OCJP). In addition, the California State University, University of California, and the California Community Colleges provide educational courses on substance abuse issues. Figure 1 displays the amounts proposed for the programs in 1990-91 (not including administrative costs) by funding source, and presents a brief description of each program. In addition, the figure shows the prevention-oriented technical assistance provided to local governments by the departments. The figure is a more detailed presentation of California's prevention programs than that presented in the preceding analysis, "Anti-Drug Programs in California."

The figure shows that the budget proposes to spend $103 million in state and federal funds on prevention programs. The DADP estimates that counties will spend an additional $9.3 million in local matching and other local funds on prevention programs and we estimate that local education agencies will spend approximately $14.1 million in local funding (district general fund and private funds) on drug and alcohol prevention programs. In addition, we estimate that the annual cost of teacher time to deliver prevention curriculums is from $18 million to $48 million.

As we note in the previous analysis, the budget does *not* include a substantial amount of additional federal funds that we believe will be available to California as a result of recent congressional action on the President's drug control program. Of the additional federal funds, we estimate that the following amounts will be available for prevention programs: (1) $14 million in Drug-Free Schools and Communities (DFSC) block grant funds available for allocation to the SDE; (2) $1.5 million in DFSC block grant funds for the DADP; (3) $2.7 million of DFSC block grant funds for a new program, which requires the Governor to fund programs in local education agencies; and (4) at least $12 million of Alcohol, Drug Abuse, and Mental Health Services (ADMS) block grant funds for the DADP. We discuss these additional federal funds in our *Analysis of the 1990-91 Budget Bill* (please see Items 6110 and 4200).

Figure 1 groups prevention programs into three major categories--school-based programs, community-based programs, and technical assistance. As the figure shows, the budget proposes $54 million for school-based programs, $42 million for community-based programs, and $3.3 million for technical assistance. We discuss each of these categories in more detail below.

REVIEW OF SCHOOL-BASED PREVENTION PROGRAMS

School-based programs designed to prevent the use of drugs and alcohol are generally of two types: (1) curriculum programs, which are delivered to the general school population and (2) high-risk youth programs, which are targeted at students who are using, or who have been assessed as being at high risk of beginning to use, alcohol or drugs.

These programs are provided in the schools but are administered at the state level by the DADP, SDE, and the OCJP. The state does not collect specific data on how school districts spend the monies they receive from the state for school-based programs.

Figure 1

Proposed Expenditures for Alcohol and Drug Prevention Programs

1990-91
(dollars in thousands)

PROGRAM	DESCRIPTION	GENERAL FUND	FEDERAL FUNDS	TOTALS
School-Based Programs				
State Department of Education (SDE):				
Federal drug-free schools and communities	Allocates funds to local education agencies for school-based alcohol and drug abuse prevention programs. (See Figure 2 for descriptions of these programs.)	--	$18,905	$18,905[a]
Office of Criminal Justice Planning (OCJP):				
Suppression of drug abuse in school programs	Provides grants to local governments for joint projects between law enforcement agencies and offices of education or school districts to present prevention programs to students and to suppress drug use in schools. (Created by Ch 952/83 [AB 1983, LaFollette].)	1,929	1,077	3,006
Comprehensive alcohol and drug prevention education (CADPE)	Provides grants to school districts for coordinated alcohol and drug prevention strategies between schools, law enforcement, and community organizations targeted at 4th through 8th grade students. (Created by Ch 92/89, [AB 1087, Hughes].)	26,700	2,600	29,300
Department of Alcohol and Drug Programs (DADP):				
Friday Night Live	Forms Friday Night Live chapters at high schools, consisting of students who pledge to be alcohol and drug free. Organizes assembly presentations, classroom activities, and alcohol- and drug-free social events.	--	75	75
School-Community Primary Prevention Program	Provides school-based prevention activities in 57 counties, including teacher training, peer support groups, and media outreach. (Created by Ch 456/85 [SB 1409, Garamendi].)	1,014	1,009	2,023

PROGRAMS	DESCRIPTION	GENERAL FUND	FEDERAL FUNDS	TOTALS
School-Based Programs--contd				
Children of Alcoholics (COA)	Provides identification and referral services in elementary school settings.	--	370	370
Student Assistance Program (SAP)	Identifies and assists high-risk students through the use of peer groups.	--	446	446
Subtotals, school-based programs		$29,643	$24,482	$54,125
Community-Based Programs				
DADP:				
Local assistance subvention to counties[b]	Allocated to counties for prevention programs. Counties spend funds as outlined in their county alcohol and drug plans. The majority of programs funded are community-based programs. (See Figure 5 for descriptions of these programs.)	$14,466	$26,242	$40,708[c]
Alcohol center for women	Provides an alcohol-and drug-free center for women through which counseling and referrals are made, located in Los Angeles.	--	95	95
Demonstration projects	Prevention programs run by the counties and selected on a request-for-proposal basis.	--	150	150
High-risk multiple problem youth	Supports three drop-in centers that provide early-intervention and treatment services to dropouts or those who are about to drop out of school.	--	484	484
Youth services	Provides funds to selected counties for training and implementation of comprehensive community-based prevention, intervention, and treatment programs for youth.	--	182	182
Teenwork	Supports a teen leadership conference focusing on youth drinking issues.	--	157	157
California youth council	Brings together youth in 10th and 11th grades to advise the DADP on drug abuse prevention.	--	50	50

PROGRAMS	DESCRIPTION	GENERAL FUND	FEDERAL FUNDS	TOTALS
Community-Based Programs--contd				
Tule River Indian Health Program	Provides peer support and alcohol education training to teen women who then become voluntary trainers and counselors in the American Indian community.	--	48	48
Modoc Indian Health Project	Provides alcohol prevention and outreach programs to American Indian women in Modoc County.	--	25	25
Red Ribbon campaign	Supports an annual statewide anti-drug campaign during Red Ribbon week.	--	30	30
Subtotals, Community Programs		$14,466	$27,463	$41,929
Technical Assistance to Local Governments				
SDE:				
Technicalassistance	Funds workshops and a resource center to assist school districts with planning and implementing prevention programs.	--	$1,575	$1,575
DADP:				
Prevention coordination	Supports a statewide prevention network comprised of alcohol prevention coordinators from each county.	--	55	55
Prevention roundtable	Supports an annual prevention roundtable of experts from the alcohol and drug prevention field.	--	40	40
COA and SAP evaluation	Evaluates the COA and SAP programs.	--	205	205
County drug program administrators	Funds regular meetings between the DADP and the county drug program administrators.	--	77	77
Technical assistance contracts	Funds the DADP contracts with a variety of organizations to provide technical assistance on specific issues, such as women's and Asian/Pacific Islander concerns.	--	253	253
Prevention resource system	Provides clearinghouse services (operated by the DADP) to collect, analyze, and disseminate information to counties, practitioners, and health care professionals.	--	500	500

PROGRAMS	DESCRIPTION	GENERAL FUND	FEDERAL FUNDS	TOTALS
Technical Assistance to Local Governments--contd				
Public policy	Provides training and technical assistance (including distribution of a manual) to counties to develop policies that address alcohol-related problems in their communities.	--	165	165
Drug abuse information and monitoring project	The DADP has contracted with the University of California at Los Angeles to establish an electronic drug abuse information collection and dissemination system to monitor drug abuse trends.	--	250	250
California State University (CSU)/University of California (UC)/California Community Colleges (CCC):				
Drug and alcohol problem management consortia	Funds seven regional consortia projects that provide information and technical assistance on developing and improving substance abuse programs at member institutions.	--	200	200
Subtotals, Technical assistance		--	$3,320	$3,320
Other				
DADP:				
General education, media campaigns	Supports media and education campaigns on alcohol issues, alcohol-related birth defects, and alcohol and youth.	--	$571	$571
Perinatal drug issues	Provides cross-training conferences, coalition building funds, and a media campaign on the perinatal drug abuse issue.	--	110	110
CSU/UC/CCC:				
Various	Funds various educational courses that cover the academic study of drug and alcohol abuse.	3,000[d]	--	3,000[d]
Subtotals, Other		$3,000	$681	$3,681
Totals, all programs		**$47,109**	**$55,946**	**$103,055**

[a] In addition, we estimate that local education agencies spend approximately $14.1 million in local funding (district general fund and private funds) on drug and alcohol prevention programs. We also estimate the cost of teacher time to deliver the drug and alcohol prevention curriculums to be from $18 million to $48 million.

[b] The DADP does not collect data on the amount of funds spent by counties on specific types of prevention programs. Although some counties spend some of their subvention funds on school-based programs, the DADP estimates that the vast majority of programs are community-based.

[c] In addition, the DADP estimates that counties will spend $9.3 million in local matching and other local funds in 1990-91.

[d] We estimate that *at least* $3 million will be spent on educational courses.

Figure 2, however, lists the typical prevention programs provided by local education agencies. Data from a survey completed for the SDE show that at least 75 percent of the schools in the state have used curriculum programs and that, depending on the definition of a high-risk youth program, between 14 and 48 percent have implemented some type of high-risk youth program.

Figure 2

Typical School-Based Drug Prevention Programs

Programs	Description
Curriculum Programs	
Here's Looking at You, 2000	A commercially developed curriculum that provides classroom teachers with a variety of exercises that are designed to teach refusal skills. The program is used by about 40 percent of all districts in the state.
Drug and Alcohol Resistance Education (DARE)	A 17-week curriculum-oriented program delivered by law enforcement personnel.
Subject-integrated instruction	Many school districts deliver instruction on drugs and alcohol as part of their regular health or science curriculum, or in drivers education.
High-Risk Student Programs	
Impact training	Program provides training for a small number of staff in each participating school in assessment of "high-risk," abusive behaviors and potential intervention techniques.
Children of alcoholics	These programs involve support groups and counseling for students with alcoholic parents.
Student assistance programs	These programs involve (1) a variety of support groups for students with different problems (such as emotional instability or family problems) or (2) "peer counseling" (where students assist other students on a one-on-one basis).
Mentor programs	In these programs, adult volunteers (often teachers or community leaders) "watch over" and counsel specific students.

CURRICULUM-BASED PREVENTION PROGRAMS

In curriculum programs, sometimes referred to as "drug education," teachers, nurses, or police officers provide instruction based on a package of written and/or audio-visual materials, generally in a classroom setting. The goal of these programs is primary prevention--preventing the onset of substance abuse.

The curriculums are usually purchased by the school district from a private company.

The practice of using prepared curriculums in classrooms as a way to prevent substance abuse began in earnest in the 1960s. Since then, the curriculums have evolved in several stages, with each new curriculum trying to take into account the results of the previous curriculum's approach. In this section, we review the evolution of these programs and the evaluations that have been done on them.

Information-Only Programs and Scare Tactics Can Increase Use

During the late 1960s and early 1970s, the dominant form of drug education was the information model. This model was based on the assumption that youth use drugs because they are unaware of the harmful effects of the substances. Programs proliferated which provided information about the physical and psychological effects of different substances, and the legal implications of using illicit drugs. Many of these programs used scare tactics or "fear-arousal" techniques to emphasize the consequences of drug use. Some programs were presented by students, and others by outside experts such as nurses or police officers. Rigorous evaluations have repeatedly shown that, although these programs may have increased student's knowledge about drugs, they did not reduce drug use. In fact, some studies found that *the programs actually increased drug use.* These results led the National Commission on Marijuana and Drug Abuse in 1973 to conclude that "no drug education program in this country or elsewhere has been sufficiently successful to warrant our recommending it."

Why were these programs unsuccessful? The most common explanations given are: (1) many people use damaging substances even when they know the harmful implications of their use, (2) programs that exaggerate the harmful effects of drugs and only address the negative consequences tend to be disbelieved, and (3) the underlying assumption--that increased knowledge changes attitudes and that these attitude changes will lead to behavior change--is an oversimplification of the conditions that lead to drug abuse.

"Individual Deficiency Model" Programs Have Shown Little, If Any Effect on Drug Use

In the early 1970s, the "individual deficiency model" became popular. This model assumed that the problem was with the youth: young people use drugs because they lack self-esteem or the proper decision making tools. These programs took many

different forms, such as (1) having students work in small groups to develop communication skills; (2) providing teacher training in communication skills and nonpunitive discipline in the hope of fostering better classroom management, as well as making the classroom environment more responsive to students' needs; and (3) "affective education" designed to help students clarify their values, improve their self-esteem, and enhance their problem-solving skills.

Most of the evaluations done on these types of programs found no positive effects on drug use. For example, the National Institute on Drug Abuse (NIDA) conducted a series of evaluations of individual deficiency model programs in Napa, California from 1978 to 1983. These evaluations were carefully designed and implemented. They probably represent the most conclusive evaluations ever done of this kind of program. The evaluations studied the long-term effects of the programs by following youth who participated in the programs, and youth who did not, for one to three years. The only positive effect that was found was for one of the "affective education" programs, which was shown to have a positive, but short-term effect on girls' cigarette and drug use. Otherwise, the programs failed to affect drug use; attitudes toward peers, school, or self; or academic achievement.

Some of the reasons given for the failures of these programs are that (1) the programs are difficult to implement, (2) research shows that while low self-esteem is somewhat correlated with drug use, other factors are substantially more important, and (3) little is known about which values affect drug use.

"Social Influence Model" Programs Have Been Successful in Delaying the Onset of Cigarette Use

The first major breakthrough in substance abuse prevention came with the application of the "social influence model" to cigarette smoking. The social influence model was based on the premise that peers, family, and--to a lesser extent--the media influence the initiation of cigarette smoking. In general, these programs involved (1) making students aware of the social pressures to smoke, (2) teaching refusal skills, (3) using peer leaders, and (4) correcting misperceptions regarding social norms about smoking (surveys have shown that youth think cigarette smoking and drug use are much more prevalent among their peers than they actually are). In addition, many of these programs encourage students to make public commitments against smoking cigarettes.

Most, but not all of the evaluations that have been done on these programs have found reductions in both experimental and regular cigarette smoking.

Applying the Social Influence Model to Alcohol and Other Drugs: Little Evidence of Its Effectiveness

Based on the success of the social influence model in reducing cigarette smoking, educators applied it to alcohol and other drug use, on the theory that, since family and peers also affect drug use, this model should be effective for other drugs besides tobacco. Unfortunately, the evaluations of these programs as applied to other drugs have been much less promising. A few have found short-term positive effects for alcohol and marijuana use, but most have found no effect on other substances.

The major reasons given for the differences in the model's effectiveness, at least between alcohol and tobacco use, has to do with the difference in society's attitudes about using these different substances. Specifically, in the last 20 years prevailing societal opinion has shifted against tobacco use, whereas attitudes toward alcohol remain mixed. For example, whereas tobacco advertising is banned from television, alcohol advertising is not.

Evaluations of Combined Curriculum Programs: Little Evidence of Effect on Use

During the 1980s, several curriculum programs became popular which *combined* components of the programs described above. For example, many of these programs included information components dealing with the consequences of alcohol and drug use, components aimed at increasing self-esteem, and components on peer resistance skills. As was the case with the other curriculum programs, the evaluations have not found any long-term effect on alcohol and drug use. The most comprehensive evaluation of the combined curriculum approach was a study funded by the National Institute of Alcohol Abuse and Alcoholism (NIAAA) of an early version of a curriculum that is widely used in California schools, "Here's Looking At You" (HLAY). The HLAY curriculum includes materials and exercises designed to increase self-esteem, strengthen decision making skills, increase knowledge about the effects of substances (particularly alcohol), and instill attitudes favoring moderation in consumption. The evaluation collected data over three years, beginning in 1978, on HLAY programs operated in the Seattle, Washington, and Portland, Oregon areas.

The evaluation was designed to measure the effect on variables such as knowledge, self-esteem, and attitudes toward abusing alcohol, as well as the student's actual alcohol and drug use. Students tested two years after the program revealed some increases in *knowledge*, but the study found no effect of the curriculum on alcohol and drug *use*. Moreover, this finding

applied even with respect to students who received more than the average number of HLAY sessions and those who had the most committed teachers.

A Combined School and Community Approach to Primary Prevention: Results Unclear

A relatively new school-based primary prevention program is one which combines a curriculum program with a community-based approach (discussed below). This program, Students Taught Awareness and Resistance (Project STAR), currently operates in the Kansas City and Indianapolis metropolitan areas.

Project STAR combines a social influence model curriculum with an emphasis on getting students and their families involved in the community. The community involvement generally takes the form of advocacy on policy issues surrounding alcohol and drug use (such as restrictions on liquor and cigarette advertising).

The program reports that it has achieved significant reductions in alcohol and cigarette use but not in marijuana use. The program's evaluations did *not* address any effects on the use of harder drugs. Because of several flaws in the program's evaluation--for example, the control groups were *not* randomly selected and published reports of the evaluation results are inconsistent--we are not certain to what extent the reported effects on alcohol and cigarette use are reliable.

Most Curriculum Programs Have Not Been Effective

Evaluations of the most widely used curriculums in California have not supported the effectiveness of the curriculum-based approach. While we acknowledge that an effective model may eventually be developed, the track record of these programs in reducing drug use has not been good.

HIGH-RISK YOUTH PREVENTION PROGRAMS

School-based programs targeted at *high-risk* youth generally include one or more of the following four components:

- ***Identification.*** Often districts train classroom teachers to identify signs of emotional and social instability, such as sudden changes in dress patterns or completion of school work. Other methods of identification may include (1) designating certain staff (or students) as "helpers" whom students may approach in order to talk about their problems and (2) working with law enforcement agencies to identify students who have committed crimes. Al-

though high-risk programs are often used for older children, it is also possible to identify "high-risk" signs in young children, for example, by determining if there is a drug user in the child's immediate family.

- ***Assessment.*** Typically, once students have been identified as potentially high risk, they are referred to a "core" team of teachers, administrators, and other professionals who have been trained in assessment techniques.
- ***School-Based Support.*** Support services often provide students with training and practice in interpersonal communication skills. Examples of support services include counseling by a school nurse or by peers, or participation in support groups for students with specific problems, such as a drug addiction, having an alcoholic parent, or displaying emotional instability.
- ***Community Referrals.*** Many schools refer students to organizations in the community for more intensive services, such as for drug treatment or counseling.

The most comprehensive programs that we visited during our site visits contain all four of these components; many, however, may contain only one or two of them. In the schools, these programs are not as widespread as curriculum programs.

In the remainder of this section, we review the research literature on adolescent drug use, which shows that casual adolescent drug use usually does *not* result in long-term consequences but that regular and heavy use does. In addition, we review the research literature which shows that youth who have many behavioral and psychological problems are at risk of becoming heavy users and therefore are the group to which prevention programs should be targeted. Finally, we review the limited evaluations available on these programs.

Casual or Experimental Alcohol and Drug Use Does Not Usually Result in Long-Term Negative Consequences

A longitudinal study conducted by two UCLA researchers has shown that most drug use does not lead to addiction or result in serious consequences for the user. This study has followed 1,634 students from 11 Los Angeles County schools since 1976. The study compares students who used alcohol or drugs with those who abstained to determine what effect adolescent drug use had on their lives. For example, the researchers looked at the effect on family formation (marriage and having children), family stability, criminality, and educational attainment. The study found that casual or experimental alcohol and drug use did *not*

result in long-term negative consequences. The researchers stated that "the typical youngster who has a beer or some marijuana at a party is not the one who is going to develop long-term damage as a result of his or her drug use." However, regular drug use during adolescence was found to be associated with increased involvement with drug crimes and stealing, decreased college involvement, and earlier family formation. Furthermore, use of hard drugs significantly reduced the individual's chances of graduating from high school, and was correlated with reduced social support and increased loneliness in young adulthood.

There Are Substantial Differences Between Experimental Drug Users and "High-Risk" Users

Because of the high prevalence of alcohol and drug experimentation by youth, researchers have begun to emphasize the need to differentiate among experimental, regular, and problem use. Those individuals who are able to learn from their drug use experience and eventually give up drugs are significantly different from those who do not stop the risk-taking process, and begin to use drugs as an escape or to resolve severe psychological problems. As we note in the first analysis of this series, a study based on the Attorney General's 1987-88 survey of public school students reported that high-risk users were less likely to live with both parents, tend to have lower grades, are more likely to have had earlier experiences with alcohol and drug intoxication, scored higher on measures of dropout potential, and engaged in more high-risk behavior (such as attending school while "high" on drugs). Other research has also found that, while peer influences affect experimental use of drugs in social settings, such use is not likely to prove harmful unless it is combined with psychological problems, in which case it may well lead to eventual dependence.

Youth Who Will Have Problems With Drugs Are Relatively Easy to Identify

One of the main themes of the recent research literature is the move to a risk factor theory of drug use. This theory is based on the observations that there are many different paths that could lead one to drug use and that youth who regularly use drugs have many other problem behaviors besides their drug use. Because youth who develop drug problems also have other problems, they can be identified relatively easily.

One study using the UCLA longitudinal data base described above identified 10 risk factors that were correlated with substance use. These risk factors, in decreasing order of their affect on drug use, were: peer drug use, deviance, perceptions about

adult drug use, early alcohol use, sensation seeking, poor relationship with parents, low religiosity, poor academic achievement, psychological distress, and low self-esteem. The extent to which these factors correlate with drug use varies. For example, peer drug use was found to be six times as correlated with drug use as poor self-esteem. Many of these factors are related to deviant behavior and correspond with the findings of the UCLA study that drug use is most highly correlated with a lack of social conformity. Figure 3 summarizes the results of the study. The top panel in Figure 3 shows the percentage of youth who had ever tried cigarettes, alcohol, marijuana, and hard drugs (hard drugs include 14 substances, such as amphetamines, cocaine, heroin, and PCP). It shows that the prevalence of use increases steadily with the increase in the number of risk factors. For example, 14 percent of the students who were identified as having 1 risk factor had tried hard drugs at least once, whereas 78 percent of students having 7 or more of the risk factors had tried hard drugs.

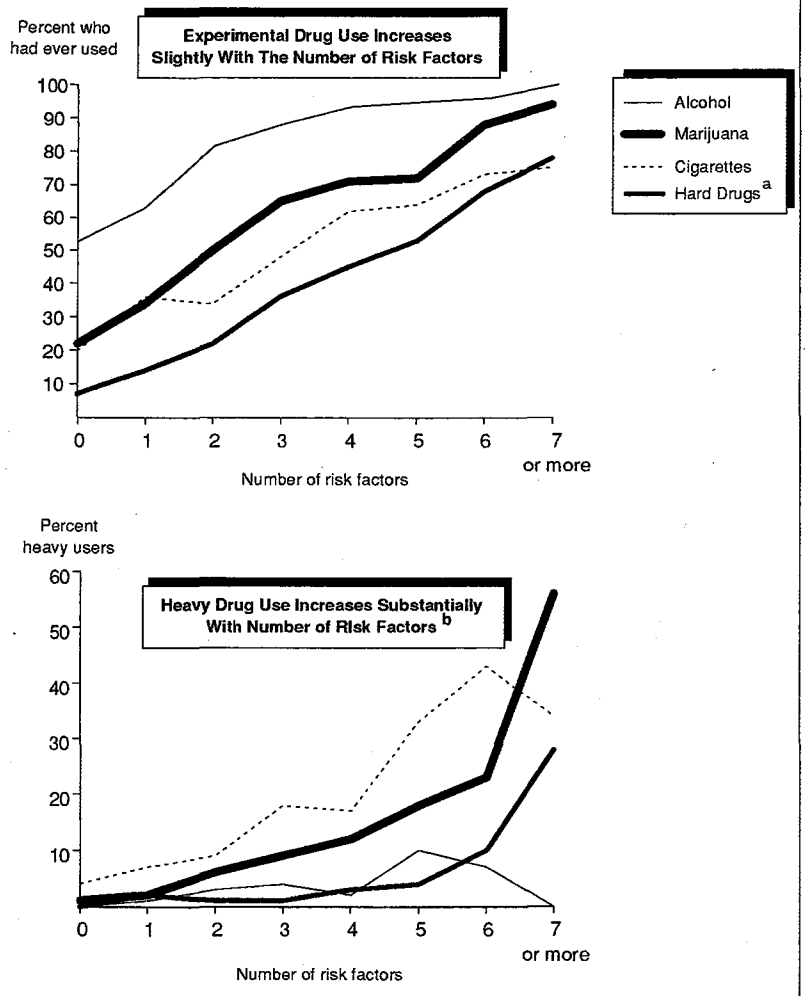
The bottom panel of Figure 3 shows the relationship between the number of risk factors and the likelihood of *heavy drug use*. As the figure shows, heavy drug use increased substantially with the number of risk factors. For example, 2 percent of those with one risk factor were found to be heavy users of hard drugs, while 28 percent of those with seven or more risk factors were heavy users of hard drugs. Interestingly, the percentage of heavy users of cigarettes and alcohol dropped off for students with seven or more risk factors for cigarettes and six for alcohol. The authors theorize that this may represent a transfer from cigarettes and alcohol to marijuana and hard drugs.

The figure shows that experimentation is fairly common, but more prevalent among youths with a high number of risk factors. On the other hand, heavy drug use is fairly uncommon, but its incidence increases substantially with the number of risk factors. It is also important to note that these results have held up over time. Specifically, using their longitudinal data, the researchers were able to determine that the number of risk factors were associated with increased likelihood of use, both at the time the risk factors were identified and one year later.

The UCLA study concluded that, although not every drug user will fit this characterization, the average frequent drug user will have a life-style that includes rebellion, involvement with other deviant or illegal behaviors, poor family connections, few educational interests, early involvement in sexual activities, emotional turmoil, alienation, and early involvement with the work force. In general, students exhibiting these characteristics and behaviors are relatively easily identified by school personnel.

Figure 3

Risk Factors and Drug Use Los Angeles Students, Grades 10-12



[a] Hard drugs include 14 substances such as amphetemines, cocaine, heroin, and PCP.

[b] Heavy cigarette, alcohol, and marijuana use is defined as daily or more use, and heavy hard use is defined as weekly or more use of any hard drug substance.

Source: *Risk Factors For Drug Use Among Adolescents: Concurrent and Longitudinal Analysis,* American Journal of Public Health, May 1986, vol. 76, no. 5, Michael D. Newcomb, Ph.D., Ebrahim Maddahion, Ph.D., and P.M. Bentler, Ph.D.

Few Evaluations Have Been Done on High-Risk Youth Programs

In general, there have been few evaluations of high-risk youth programs. One study that reviewed evaluations of a number of prevention programs found that only two types of programs had an effect on drug use: (1) peer programs--where peers were used for most of the program implementation--and (2) "alternative programs" for special population groups. The alternative programs were aimed at "at-risk" youngsters and emphasized one-on-one relationships, tutoring, job skills, and physical adventure.

Several of the high-risk youth programs we visited were similar to these two programs. For example, many of the programs use peer groups and one-to-one relationships. Since there have been so few evaluations of high-risk programs to date, however, it would be premature to conclude that the current programs operating in the state are effective.

CONCLUSIONS AND RECOMMENDATIONS ON SCHOOL-BASED PROGRAMS

We recommend that the Legislature give funding priority to programs that target high-risk youth.

While experimental drug use by teenagers is still fairly common, such experimental use does not typically lead to the kinds of problems associated with long-term abuse. There is a relatively small subgroup of youth, however, who go beyond experimentation to develop serious substance abuse problems and these youths can be identified relatively easily because they also tend to have many other social and behavioral problems. It therefore appears that drug abuse prevention strategies that focus primarily on discouraging experimental use are too broad-based in their approach. Moreover, the most widely used, broad-based prevention strategies are curriculum programs that have been extensively evaluated and *have not been shown to be effective.*

Therefore we conclude that the best prevention strategy would be to emphasize programs that target high-risk youth. Consistent with this strategy, we recommend that the Legislature adopt Budget Bill language in the SDE, OCJP, and DADP items requiring these departments to give funding priority, within youth prevention programs, to those programs that target high-risk youth.

With regard to OCJP's Comprehensive Alcohol and Drug Prevention Education (CADPE) Program, we also recommend enactment of legislation eliminating the requirement that school districts adopt a standardized age-appropriate curriculum as a

condition of eligibility for receiving CADPE funding. Eliminating this requirement would allow districts greater flexibility to use CADPE funds for programs that serve high-risk youth.

COMMUNITY-BASED PREVENTION PROGRAMS

What Is a Community-Based Program?

Rather than being located in and focused on the schools, community-based programs are targeted at *entire* communities. These programs generally entail either communitywide events, or programs targeted at youth, particularly high-risk youth. As Figure 1 shows, state-supported community-based programs are funded predominantly through the DADP county subvention process. In administering these programs, most counties we visited divide their service areas along geographic and ethnic lines and assign a prevention coordinator to each area.

The DADP does not collect data on how counties spend their prevention funds. Figure 4, however, lists the kinds of prevention programs that the department advises are most common. As the figure shows, the programs range from public meetings to individual counseling. The goals behind community-based programs are to (1) get the community involved in ridding its neighborhood of environmental factors that contribute to substance abuse problems (for example, visible drug dealing, a high concentration of bars and stores that sell alcoholic beverages, and empty lots or beaches where youths congregate to drink), (2) make families aware of the alcohol and drug problems in their communities and encourage them to talk with their children about this issue, (3) provide training to families and community leaders, (4) advertise the availability of alcohol and drug treatment and support services in the community, and (5) provide referrals to these programs. Many of the alcohol and drug program administrators work with recognized community leaders--for example, religious and business leaders--to reach out to the rest of the community.

A recurring theme that we heard in our visits to counties was that their greatest difficulties are in organizing community activities within the areas that need assistance the most; that is, the heaviest drug using and selling areas. According to the administrators we spoke with, these areas are difficult to organize because (1) it is difficult to find prevention coordinators who know these areas and their leaders, (2) the communities may lack experience in organizing, or (3) the community's poverty makes it difficult to find the private funds needed to help support prevention efforts.

Figure 4

Typical Community-Based Alcohol and Drug Prevention Programs

Programs	Description
Community-Wide Programs	
Family counseling services and parent education	Designed to assist families suffering from alcohol- and drug-related problems and educate parents on alcohol and drug issues.
Prevention, education, and public relations committees	Focused on reducing the environmental risks associated with alcohol-related problems and on issues related to the availability of alcohol in various settings.
Public policy	Public hearings, forums, and training events promoting public policy related to alcohol and drug issues.
Community activities	Focusing on increasing public awareness of alcohol and drug problems and emphasizing the role of the community. These programs include needs assessments, public forums, and providing culturally relevant programs and information to the community.
Alcohol-free living centers	Centers that provide an alcohol- and drug-free environment, open to the community.
High-Risk Youth Programs	
Early intervention programs	Prevention programs, both community and school based, aimed at high-risk youth who have begun to use alcohol or drugs.
Drop-in centers	Centers that provide information and alternative drug-free activities to the community and youth in particular.
Peer leadership training for youth	Many counties have peer-led prevention programs and emphasize leadership training for these peer leaders.

Community Programs Have Not Been Evaluated

We found no rigorous evaluation of any of the various types of community programs summarized in Figure 4. Several of the researchers we spoke with indicated that the repeated failure of school-based curriculum programs to produce results has, however, led an increasing number of researchers to turn their attention to community programs. While this may ultimately lead to a better understanding of what works and what does not work in this area, any conclusive results of this work will take years to achieve.

While there are no evaluations of community-based programs, there is an extensive literature on one increasingly popular community-based approach to preventing *alcohol*-related problems.

DADP's Community-Based Prevention Strategy for Alcohol-Related Problems

We recommend that the DADP provide the Legislature with its plan to evaluate the effectiveness of the community planning pilots.

The alcohol field and the alcohol research community have for several years promoted a strategy that is based on controlling the availability of alcohol through community organization. This focus has grown out of years of research and study of local programs. For example, research shows that (1) higher densities of bars and stores that sell alcoholic beverages are associated with higher alcohol-related disease rates, (2) more than half of the drivers arrested for driving under the influence of alcohol had their last drink in a bar, and (3) in certain areas (skid rows), store owners cater to the public inebriate.

These findings have led the alcohol research community to promote a strategy that relies on community organization. Under this approach, communities are trained to examine the alcohol-related problems in their area and work to (1) better manage the decisions over the placement and number of alcohol outlets and (2) monitor public places for drinking. The DADP has embraced this strategy and has helped to fund the production of "The Manual For Community Planning to Prevent Problems of Alcohol Availability." This manual has been distributed to county alcohol administrators and the DADP is actively helping them to implement its suggestions.

In addition, the DADP has chosen four pilot communities--the Fremont/Newark/Union City area, Ukiah, Merced, and the San Pedro district of Los Angeles--which will be given additional assistance in implementing this strategy. While the department plans to monitor the implementation of the strategies outlined in the manual in the pilot communities, at the time this analysis was prepared, it had no specific plans to evaluate the pilots. Such an evaluation would help the Legislature in formulating its overall strategy for substance abuse prevention. We therefore recommend that, prior to budget hearings, the DADP provide the Legislature with its plan to evaluate the effectiveness of the pilots.

The DADP Should Develop for a Community Planning Manual to Prevent Drug Problems

We recommend that the Legislature require the DADP to develop a community planning manual to prevent drug use and drug-related problems.

Our analysis indicates that the community organizing approach that has been developed in the alcohol abuse prevention field has potential applications in the area of drug abuse prevention. For example, community action could be used to discourage public drug selling and to prevent people from congregating to use illicit drugs in public areas. The DADP recognizes this and advises that it intends to develop a manual for county drug administrators similar to the one currently available to alcohol administrators. However, at the time this analysis was prepared, the DADP had not provided the Legislature with its specific proposal. We therefore recommend that the Legislature require the DADP to develop a community planning manual to prevent drug use and drug-related problems and distribute the manual to county offices of drug programs.

TECHNICAL ASSISTANCE

As Figure 1 shows, the budget proposes $3.3 million to support a variety of technical assistance activities by the DADP and SDE. The DADP's technical assistance activities include roundtables and meetings with county and departmental staff, maintenance of clearinghouses for prevention information, and training programs for county staff. The SDE sponsors workshops and a resource center to assist school districts in planning and implementing their programs. In addition to formal technical assistance programs, the SDE, DADP, and OCJP monitor and advise on the specific programs for which they provide state and federal funds to counties and school districts.

Departments Need to Provide More Technical Assistance to Local Governments

We recommend that the Legislature encourage the SDE and the DADP to disseminate information on the effectiveness of various prevention programs to school districts and county administrators and to conduct evaluations of programs in order to identify successful approaches.

As discussed in detail above, our review of the research literature in the area of substance abuse prevention programs indicates that there is scant evidence of the effectiveness of any

of the current approaches to prevention. The only type of prevention program that has been thoroughly and rigorously evaluated is the school-based primary prevention programs that rely on packaged curriculums, and these evaluations have shown that these programs have little effect, especially on the use of hard drugs. We recognize, however, that policymakers need to continue to look for ways to prevent substance abuse and to reduce the problems associated with it. We also believe that there are some approaches that have significant potential to reduce abuse; for example, school-based programs targeted at high-risk youth and the community organization approach to community-based programs.

Given the uncertainty about what works and what does not work, we believe that the Legislature should encourage program experimentation at the local level, and evaluation and information sharing at the state level. We therefore make the following recommendations:

- ***Dissemination of Information to Local Governments.*** We recommend that the Legislature require the SDE to summarize in writing the available research literature on school-based prevention programs and disseminate this information to school districts. We also recommend that the Legislature require the DADP to disseminate information on school- and community-based prevention programs to county drug and alcohol administrators.
- ***Evaluations.*** We recommend that the Legislature adopt Budget Bill language directing the SDE to allocate a minimum of $500,000 in federal funds for a longitudinal study of drug prevention strategies. Please see Item 6100-183-890 in the *Analysis of the 1990-91 Budget Bill* for the specific recommended language. We also recommend that the DADP report to the Legislature, prior to budget hearings, on the availability of federal funds through the National Institute on Drug Abuse and the National Institute on Alcohol Abuse and Alcoholism for evaluations of county-run programs.
- ***Data Collection.*** As noted earlier, the state has very little information on how county offices of alcohol and drug programs spend their prevention funds. To address this data deficiency, we recommend that the DADP, in conjunction with county alcohol and drug administrators, develop a way of collecting information on the types of prevention programs administered by the counties.

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