125806

EFFECTIVE SYSTEMWIDE STRATEGIES TO COMBAT YOUTH DRUG AND ALCOHOL ABUSE:

AN AGENDA FOR ACTION

VOLUME 1

Pacific Institute for Research and Evaluation

Suite 805 7101 Wisconsin Avenue Bethesda, Maryland 20814 (301) 951-4233

TABLE OF CONTENTS

This report was prepared under Cooperative Agreement Number 87-JS-CX-K096 from the Office of Juvenile Justice and Delinquency Prevention, U.S. Department of Justice. Points of view or opinions expressed in this document are those of the authors and do not necessarily reflect the official positions or policies of the Department of Justice.

LIST OF CONTRIBUTORS

Lana Harrison
National Institutes of Justice

Richard Clayton
Scientific Director, Center for Prevention Research
University of Kentucky

Karst Besteman
Executive Director, Alcohol and Drug Problems Association
Washington, DC

T. William Tower, II
First Sargeant, Maryland State Police

Catherine Bell-Bolek
NIDA

Tom Farrel
Principal, Aspen High School
Aspen, CO

Debbie Jarvis
Coordinator, Oregon Student Safety on the Move (OSSUM)
Corvallis, OR

Karol Kumpfer
Graduate School of Social Work
University of Utah

David Bragden
National Commission on Drunk Driving

Jerry Neddle
International Association of Chiefs of Police

Gus Sandstrom, District Attorney
Pueblo, CO

Barry Sweedler
Director, Bureau of Safety Programs
National Transportation Safety Board

Richard Catalano
Developmental Research and Programs
Seattle, WA

H. Laurence Ross
NIAAA

Kenneth Winters
Adolescent Assessment Project
St. Paul, MN

SCOPE OF THE YOUTH DRUG, ALCOHOL, AND IMPAIRED DRIVING PROBLEM

Chapter 1

Scope of the Youth Drug, Alcohol and Impaired Driving Problem

Extent of Use of Various Substances

This nation has a long and turbulent history of drug and alcohol use, punctuated by attempts at control and suppression. The origins of the "drug reform" movement can be traced to the mid 1850's, growing up as part of a larger Temperance movement dedicated to the advancement of the human condition via improved morality and economic conditions. Various cities and states began enacting laws aimed at curbing recreational drug use as early as 1875 (beginning with the opiates, but also extending to tobacco, alcohol, and marijuana), but many of these were subsequently repealed. The first national controls were initiated in 1887, followed by intermittent attempts to tighten constraints (aimed primarily at controlling opium smoking among Chinese immigrants) over the next two decades. The Harrison Act of 1914 is credited with totally banning the recreational use of narcotics -- the opiates, cocaine and their derivatives. Although much controversy existed over the interpretation of the law, resulting Supreme Court decisions and the actions of the Treasury Department, as the watch dogs of the law, soon made it clear that the law functionally prohibited not only recreational drug use, but even circumscribed the role of the medical community in dispensing narcotics.

Some six years after the Harrison Act, alcohol was prohibited. However, national prohibition was repealed 13 years later in 1933. Marijuana was the next of the illicit drugs to be banned, with the passage of the Marijuana Tax Act in 1937. It was not until 1965 that hallucinogens, amphetamines and sedatives were regulated, although amphetamines and sedatives had been viewed in some sectors as a problem since the 1930's.

Concern about the youthful use of any of these drugs was not a contributing factor in their regulation until the mid-1960's. When the various substances were banned, they were primarily associated with minority groups, i.e., the Chinese with the opiates, Blacks with cocaine, lower class European immigrants with alcohol, and Mexicans with marijuana. The burgeoning of hallucinogen and marijuana use by a college age population in the mid-1960's marks the first appearance of an association between youth and drug use.

Gallup conducted the first national surveys on illicit drug use, starting in 1967. While only 5% of all college students admitted to ever having used marijuana in 1967, by 1969, this number had grown to 22%. A comparable study of the adult population in 1969 revealed a 4% incidence of use. However, those in the 21-29 year old age bracket reported a 12% incidence, in comparison to 1% of those 50 or older. By 1971, fully half (51%) of all college students reported using marijuana sometime in their lifetime, 41% had used in the past year, and 30% in the past 30 days. American youth were in the throes of an epidemic.

The first survey of drug use in the general population was conducted under the auspices of the National Commission on Marihuana and Drug Abuse in 1971. They found "the most widely used mood-altering drug in America is alcohol", and that per capita consumption had been increasing in recent years. About half (53%) of all adults and one-fourth (24%) of the youth aged 12-17, had consumed alcoholic beverages in the week prior to the survey. In terms of illicit drug use, 16% of adults and 14% of youth admitted to marijuana use, and 5% of both adults and youth indicated some hallucinogen use. The general classes of sedatives, stimulants, and tranquilizers had been used (for other than medical reasons) by 7% of adults and 6% of youth. Cocaine had been used by 3% of adults and 1.5% of youth, while 1.3% of the adults and .6% of the youth admitted to heroin use. Perhaps the real contribution of this first national study of drug use was to dispel some of the hysteria in the nation that all kids were "on drugs." However, before becoming overly optimistic, it should be pointed out that 5% of junior high, 11% of high school, and 8% of college students admitted to being daily marijuana users. Also, recall that one out of every four adolescents between the ages of 12 and 17 reported alcohol consumption in the past week.

The drug epidemic appeared to have peaked in the late 1970's, and overall rates of illicit drug use have since been gradually declining. In a national survey of high school seniors in 1979, 65% reported some experience with an illicit drug (for

28%, marijuana was the only illicit drug they had used). Ten percent were daily marijuana users. Nearly all had used alcohol (93%), 7% were daily drinkers. More alarming is that 41% of the seniors reported that on at least one occasion in the past two weeks, they had five or more drinks in a row. The percentage of daily users for any other classification of drugs (heroin, inhalants, hallucinogens, cocaine, stimulants, sedatives, and tranquilizers) was less than 1 percent. However, as you would expect, the drug with the highest daily consumption rate was tobacco -- one in four seniors reported daily cigarette smoking, and 17% smoked one-half pack or more a day (Johnston, Bachman, and O'Malley, 1979).

Although the late 1970's marked the crest of the drug epidemic, rates of illicit drug use in the U.S. remain at high levels among our youth. It appears that the drug epidemic started among young people in the U.S., but quickly spread to the youthful segments of the population in most other industrialized nations. The U.S. still has the dubious distinction of having the highest rates of illicit drug use by its school age population found anywhere in the world -- particularly for marijuana and cocaine.

Currently, over half (57%) of the youth in this country report some experience with an illicit drug prior to graduating from high school; and over a third have tried a drug other than marijuana. Half (50%) of the high school seniors in 1987 indicated they had tried marijuana, 36% had used it in the last

year, about one in five (21%) reported use in the past month, and 3.3% indicated they were daily marijuana smokers. Alcohol use remained nearly universal among high seniors, despite the fat that the legal drinking age in most states is 21. Fully 92% of the graduating class of 1987 indicated some use in their lifetime, two-thirds in the past month, 5% use daily, and astounding 37% reported having 5 or more drinks in a row at least once in the past two weeks. Among college students, nearly half (45%) reported having 5 or more drinks in a row in the past two weeks. And while there is evidence of a downturn in the use of most illicit drugs since the late 1970's, there has been no drop off in alcohol use among this population in the last few years.

The next most frequently used class of drugs among these youth were the stimulants (22% lifetime use), followed by the inhalants (17%), and cocaine (15%). (One in 18 has tried crack cocaine specifically.) Other than tranquilizers, which had been illicitly used by 11% of the seniors in 1987, all the other classes of drugs had been used by less than 1 in ten students. However, in terms of more frequent use as measured by use in the past 30 days, stimulants had been used by one in 20 (5.2%); cocaine, by one in 24 (4.3%); and marijuana, by one in five.

While the overall epidemic has receded some in the 1980's, cocaine use has not followed this general pattern. The percentage of young people using cocaine remained fairly stable from the early to mid-1980's, while the use of other illicit drugs among this age group was decreasing. Only in the past two

years have we witnessed any hint of a downturn in cocaine use. Nevertheless, among young adults in their late twenties some 39% have tried cocaine, and 16% have used in the past year. One in 15 (6..7%) have tried crack, specifically (Johnston, 1988).

It's important to note that the annual national survey of high school seniors omits between 15% to 20% of youth who drop-out prior to high school graduation. It is generally acknowledged that drug use among high school drop-outs is higher that reported among graduates. Therefore, while these numbers reflect a high rate of drug and alcohol use among the nation's youth, these rates would be even higher if drop-outs were included in the study.

Whereas most students increase their active drug use during the first few years out of high school, and then start to decrease use, there are some exceptions to this general trend. For example, cigarettes are used more frequently as one gets older; in general, lighter smokers become heavier smokers. While alcohol use increases through the mid-twenties, and then falls off, the most prominent change in drinking patterns is a decrease in binge drinking -- defined as having 5 of more drinks in a row on a single occasion. While this is good news, nevertheless, between 30% and 40% of young adults in the ten years following high school graduation, indicate at least one occasion of binge drinking in the past two weeks.

This brings up an important problem that has been identified as the number one killer of youth in this country -- drinking and

driving. Of the 30% of high school seniors in 1987 that indicated they had been stopped and warned or ticketed while driving an automobile, over half (15%) of these young people reported they had consumed alcohol before being stopped. One in twenty (5%) had smoked marijuana prior to being stopped, and 1% had used other illicit drugs. Of the 25% who had been involved in an accident, about a third (9%) had been drinking, 5% had been smoking marijuana, and 1% had used some other illicit drug prior to the accident. However, even more problematic is that over a quarter (27%) of all seniors indicated they had driven while under the influence of alcohol at least once during the past two weeks. Sixteen percent had driven after consuming 5 or more drinks in a row in the two weeks prior to the survey. Nearly 4 out of 10 seniors (38%) indicated they had been a passenger in a car within the past 2 weeks when the driver had been drinking, and one in five (21%) had been in a passenger that recently in a car in which the driver had 5 or more drinks. Since the time period they were questioned about was so short and we're only looking at one particular cohort, this is a totally unacceptable level of drinking and driving which testifies to the staggering incidence of drinking and driving among our young people.

Therefore, while the overall rates of illicit drug and alcohol use (as well as cigarettes) among young people have shown some decline in the recent decade, they remain at extremely high levels -- higher than any other industrialized nation in the world.

and poorly learned behaviors (such as driving) are impaired. Reductions in anxiety and judgment coupled with impaired motor coordination undoubtedly contribute to the high levels of association between accidents and alcohol use among youth. Alcohol is also involved in 30% of the homicides among people between the ages of 15 and 24, and 20% of the suicides. Other accidents such as drownings and falls have also been shown to be associated with alcohol intoxication.

Since addiction to alcohol is generally considered to take a period of several years, few physical symptoms of addiction are found in adolescents. Therefore, the most significant health consequences of alcohol use for adolescents revolve around its marked association with accidents occurring while impaired. One other area of concern is the effects of alcohol on the unborn fetus, which are most severe in the first trimester of pregnancy -- before many women realize they are pregnant. Unintended, undiagnosed pregnancy is all too common in this age group and these fetuses are exposed to the harmful effects of alcohol.

Marijuana

Marijuana is the most frequently used of the illicit drugs. The pharmacological effects of marijuana are related to the amount of delta-9-tetrahydrocannabinol (THC) and other cannabinoids in the leaves and flowering tops, whose concentration may vary greatly depending upon where the marijuana was grown, processing, time since harvest, etc. The effects of the drug begin within minutes of being inhaled, and differs from

EFFECTS ON MENTAL, PHYSICAL, AND SOCIAL HEALTH AND DEVELOPMENT

Adolescence is the transition period between childhood and adulthood -- characterized by dramatic psychological, biological and environmental changes. (The terms youth and adolescence will be used interchangeably in this chapter.) Since adolescents are at the stage in the life cycle when an individual acquires skills in the transition to adulthood, drug use has the potential to significantly interfere with development. If young people turn to drugs to deal with their problems, they fail to develop problem solving and coping skills. If they habitually turn to drugs for fun and recreation, they may come to equate drug use with fun so that the two seem inseparable. The effects of drugs are dose-related, and are also affected by the personality of the user, his or her expectation of the effects, and milieu in which the drug is used. Adolescents heavily involved with drugs (including alcohol) will inevitably exhibit dysfunction in other spheres of their life -- in school, in the family, with peers. Turning to a discussion of the pharmacology of drugs and their effects on the user, let us consider each individually.

Alcohol

Alcohol is a central nervous system depressant, and at high blood levels, leads to respiratory depression, coma, and death. At low blood levels, it impairs regulatory and inhibitory control mechanisms in the brain. Inhibitions are reduced, thought processing is impaired, and attention span is decreased. As blood alcohol level increases, motor coordination deteriorates,

many of the other drugs in that residues deposited to brain, lungs and other organs, are eliminated by the body much more slowly.

The major effects of the drug are on behavior; however, it does cause temporary increases in heart rate and blood pressure. Although the other physiological effects of marijuana are debatable (probably due to the varying levels of THC and cannabinoids in the drug used in laboratory tests and the fact that most long term users of marijuana are also cigarette smokers), among the suspected chronic effects of marijuana use are: impaired lung functioning, decreased sperm count and motility, interference with ovulation and prenatal development, impaired immune response, possible adverse effects on heart function, and by-products remaining in body fat for several weeks with unknown consequences. There is no evidence of overdose attributed to marijuana, nor any recorded deaths.

The popularity of marijuana is related to its ability to produce euphoria and relaxation in the user at low to moderate doses. Behaviorally, use does impair short term memory, learning new material, and clarity of efficiency of the thought process, but impairment is greatest in first 30 minutes following intake and the effects are temporary.

Marijuana also has a major effect on performance of tasks related to coordination and possible effects on reaction time. The effects have serious implications for such activities as driving.

Marijuana produces pharmacologic tolerance after several days of regular use, and some minor withdrawal symptoms may be experienced by chronic users. Nevertheless, marijuana is not considered to be physically addicting -- symptoms disappear within 30 hours.

Cocaine

Cocaine is a highly addictive, dangerous drug for the user. Cocaine hydrochloride powder is the most popular form of the drug, but crack cocaine, an even more addictive form of the drug, has achieved significant popularity in the last few years. Crack is quick and easy to prepare and appeals to youth, since a single dose of crack is relatively cheap -- usually selling for $5-$10. It also generates an instantaneous and intense "rush," or state or euphoria.

Cocaine is a central nervous system (CNS) stimulant, capable of chemically altering the brain in producing feelings of euphoria and stimulation. Although its effects on the CNS are complex and not well understood, it does appear to release and then inhibit the reuptake of dopamine. Thus the extreme "high" produced by cocaine, is followed by a "crash." Chronic use leads to a depletion of dopamine, which may be responsible for the highly addictive nature of the drug, since one may be disposed to chemically encourage the release of dopamine when abnormally low levels are present. Although there are no physical symptoms associated with withdrawal from cocaine, it is still considered to be physically addicting since it produces significant

biochemical changes that appear to give rise to compulsive drug taking. The greatest danger of cocaine by far is in high addiction potential - even in reasonably well-functioning adolescents.

Deaths directly resulting from cocaine use are relatively rare, but potentially fatal toxic reactions such as brain seizures, strokes, and respiratory arrest do occur. The most common medical problems arising from cocaine use are related to mode of administration rather than the drug itself, with sinus and nasal problems associated with nasal use, bronchial problems associated with freebasing, and a host of problems associated with intravenous use. There is evidence of increased stillbirths, spontaneous abortions related to cocaine use during pregnancy. Babies born to addicted mothers show behavioral abnormalities. The most severe consequences of cocaine use are behavioral, oftentimes going unnoticed until dependency develops. Common symptoms of abuse include mood swings, social withdrawal, depression, and loss of interest in activities. As the user becomes increasingly obsessed with cocaine, all other aspects of functioning tend to deteriorate.

Stimulants

The stimulants are another class of drugs fairly popular among youth. Although the effects of this class of drugs on the brain are not well understood, they are perceived as being highly addictive. Users experience an initial "rush," followed by a more general feeling of euphoria, excitement and self-confidence.

They also experience increased alertness and a loss of appetite. Tolerance develops quickly, and chronic users display restlessness, depression, insomnia, confusion, and paranoia. There is a marked association between birth defects and amphetamine use in the first trimester of pregnancy and babies born to stimulant users experience a withdrawal syndrome.

Inhalants

Inhalants are primarily used by young teens and members of highly disadvantaged sociocultural and ethnic groups. They are particularly dangerous, and have led to death for a number of youngsters. Chronic gasoline sniffers experience neuropsychological damage and the sniffing of some glues and household products has been implicated in acute hepatic and renal toxicity.

Hallucinogens

The general class of hallucinogens and PCP specifically are known for the potential to produce panic attacks and erratic behavior during intoxication. Psychotic reactions may be precipitated often in people with significant difficulties prior to the drug use. Contradicting the scare reports of the 1960's, they have not been found to produce birth defects. PCP is a potent analgesic and intoxicated users feel no pain even if severely injured. High doses of PCP specifically, have been implicated in coma, renal failure, and even death. Use of the drug by pregnant women has effects similar to opiates on the newborn baby.

Opiates

Opiates (including heroin) are dangerous due to the preferred mode of administration (intravenous injection), and the typical lifestyle of the abuser which often includes prostitution and promiscuity, and the drugs potential to disrupt cardiac, respiratory, and gastrointestinal function. Circulatory cardiac and respiratory arrest can occur with overdose. Chronic use is also associated with viral hepatitis. Addicts have higher rates of spontaneous abortion and stillbirths, and babies born to addicts are generally of low birth weight. Maternal drug withdrawal during pregnancy can cause the death of the fetus.

Sedatives

The general class of sedative drugs are highly addictive with addiction occurring to methaqualone, specifically, in as little as one month of regular use. However, the period of regular use necessary to produce addiction varies by the specific sedative. Withdrawal can be life threatening, and includes tremors, abdominal cramps and vomiting in the early stages, and hallucinations and generalized seizures in the latter. Although a user does build up tolerance to sedatives at normal doses, no tolerance develops to acute lethal doses, making overdose common. Barbiturates have been linked to abnormalities in fetuses, although less is known about the consequences of methaqualone use during pregnancy.

The tranquilizers affect CNS functioning as muscle relaxers and may produce drowsiness, dizziness and weakness. Impairment

of psychomotor performance and memory are also frequent side effects. Acute intoxication is most often associated not with the use of tranquilizers alone, but from mixing tranquilizers with alcohol or other depressants, which intensifies the actions of the drugs. Karen Ann Quinlan is probably one of the best known cases of the adverse effects of mixing tranquilizer and alcohol; her overdose resulted in her remaining in a brain-dead coma for many years. Withdrawal following chronic use can be life threatening and must be medically supervised. There is some evidence of abnormalities in babies born to mothers using tranquilizers, but results are still inconclusive (Schonberg, 1988).

Considering the tremendous "side effects" of the various classes of drugs, one wonders why youth would want to engage in such risky behavior. If the problem were simply that young people didn't realize the hazards of drug abuse, the solution would be evident. Unfortunately, lack of knowledge is not the reason for drug use. The reasons are obviously complex and many studies have found a high degree of correlation between engaging in other forms of risky behavior and drug use.

The high school senior survey has found that a change in attitudes towards the deleterious effects of drugs tends to precede actual decreases in the use of those individual drugs. Nevertheless, we know that the rate of use of various drugs remains unacceptably high among our youthful population. Because

of increasing potency of available drugs, the amount of risk associated with drug use has increased. However, youth still haven't gotten the message that drugs and alcohol can significantly interfere with their health, both physically and mentally.

Effects on Driving

As previously noted, motor vehicle-related fatalities are the major cause of death among 16 to 24 year olds. Peak fatality figures associated with teen driving include not only teen drivers, but their passengers, passengers in other cars involved in the accident, and the bicyclists and pedestrians they hit. Results of a survey conducted in a rural community found that two of every five students in grades 10-12 reported driving after consuming two drinks, and over half admitted to being passengers on a regular basis with an impaired driver behind the wheel. In a national survey of youth between the ages of 18 and 24 conducted in 1983, 42% reported driving one or more times in the past year when they were drunk or high on alcohol. The average number of occasions young people reported driving while under the influence of alcohol was over 5 times per year (Elliot, 1987). However, recall that in the study of high school seniors, over one in four (27%) indicated they drank and drove at least once in the past two weeks. One in six had driven a car after consuming five or more drinks in a row at least once in the past two weeks. These are staggering statistics. And the problem of youth drinking and driving becomes even more apparent when considering

the vast numbers of youth who indicate they've been a passenger when the driver had been drinking.

In the previous section, it was pointed out that alcohol slows motor-coordination, and impairs poorly learned behaviors. Since it also suppresses anxiety and relaxes inhibitions, it is clear that alcohol and automobiles are a deadly combination for youth. We've also mentioned briefly the association between drug use and driving. Since illicit drug use is a much less common behavior for youth than alcohol consumption, you would expect driving while under the influence of drugs to be somewhat less common too. And while it is, nearly half of all youth between the ages of 18 and 24 who report using a given illicit substance, report driving while under the influence of that drug at least once during the previous year. In the national survey of 18 to 24 year olds mentioned above, those who reported using alcohol and multiple illicit drugs, indicated they drove while under the influence of some substance an average of one every six days. Most frequently, they drove while under the influence of alcohol (70%), then marijuana (59%), followed by other illicit drugs (45%).

Males account for twice as much DUI (driving under the influence) behavior as females. However, in a study of college students, Boyd and colleagues found that the DUI related mortality and morbidity of females equalled tnat of males; while males were more likely to be involved as drunken drivers, females were more likely to be involved as passengers.

Of all those in the 18-24 year old age bracket who reported driving while high on drugs or alcohol, 11.5% reported they had an accident. The risk was greatest for multiple drug users, however they were most likely to report having an accident while under the influence of alcohol, rather than marijuana or other drugs. Among marijuana users, the rate of accidents while DUI of marijuana was somewhat less that the rate of accidents among alcohol users. It is possible that marijuana may not impair driving to the same extent as alcohol does, however, further research is needed before this can be firmly ascertained.

Overall, the research on youth driving and drinking and/or drug use shows that the combination of these two behaviors greatly increases the risk of motor vehicle accidents. Since accidents are the major cause of fatality (as well as spinal cord injuries) among adolescents and young adults, the need to address this issue is self-evident.

Drug, Alcohol Use and Criminal Behavior

Many studies have looked at the relationship between criminal behavior, and drug and/or alcohol use, often with somewhat contradictory conclusions concerning the exact nature of the relationship. While it has been established that there are strong correlations among different types of deviant behavior, there is no firm evidence of a causative relationship; that is, either that drug and/or alcohol use causes crime, or that involvement in criminal activity causes drug and/or alcohol use. However, the age ranges for both the most serious involvement in

criminal behavior as well as the most frequent and intense use of alcohol and/or drugs occur at the same ages. All of these deviant behaviors tend to greatly diminish starting in the middle to late twenties.

For adolescents specifically, drug use is, by definition, delinquent behavior, as is underage consumption of alcoholic beverages. A number of studies have validated the high degree of statistical correlation among deviant behaviors including delinquency, illicit drug use, early alcohol use, and early sexual involvement (Kandel, 1978; Akers, 1979; Jessor, 1980; Kaplan, 1986). (Even cigarette smoking has been found to be correlated with involvement in delinquent activity.) This has led to the conclusion that these behaviors all occur within the context of a general deviance syndrome; that is, youth likely to engage in one deviant behavior are likely to engage in others as well.

Two different explanations can account for the shared variance in different forms of deviant behavior: 1) engaging in one form of deviant behavior leads to engaging in others as well, or 2) different deviant behaviors are related because they have shared influences (Osgood, et al., 1988). Drug use specifically has also been promoted as causing crime, since drug users need to generate income to purchase drugs, or because the psycho-pharmacological properties of the drugs themselves lead to the commission of criminal acts. The general conclusion is that although different forms of deviant behavior do in fact share a

common general construct, that construct in itself cannot fully account for the separate behaviors. Each behavior is both a manifestation of a general tendency and a unique phenomenon; factors important to one deviant behavior could be entirely irrelevant to others.

The relationship between crime and drug/alcohol use is also user specific; it depends primarily upon the individual and the environment, the drug is secondary. For example, only a small proportion of alcohol users, even frequent users, become heavily involved in crime, although many criminals are under the influence of alcohol while committing crimes. Likewise, there are many more people who use drugs in this country than are involved in criminal activities. However, the results of a recent urinalysis drug testing program of arrestees in several large metropolitan cities sponsored by the National Institute of Justice, found that the number males arrestees testing positive for any drug ranged from 54 to 90 percent. Fifteen to 83% in various cities tested positive for cocaine. (Unfortunately, blood alcohol level is not tested, so no comparable figures are available for alcohol use.)

Further, there is also evidence that the relationship between crime and alcohol/drug use is age specific; drug use appear to be less prevalent among arrestees over age 35 (Wish and Johnson, 1986); and alcohol use is unrelated to criminal behavior after age 31 (Temple, 1986). Therefore, while current research suggests that drug and/or alcohol use is a significantly tied to

criminality, the extent of and relationship between drug and alcohol use and criminal behavior remains ambiguous.

Social and Economic Costs

The social and economic costs of alcohol and drug abuse are difficult to estimate. However, a study at the Research Triangle in North Carolina conducted in 1984, attempted to put a dollar value on the costs to the nation of alcohol, drug abuse and mental illness (estimated based on figures available for 1980.) Direct costs in the areas of treatment and health care costs (alcohol is implicated in not only liver disease, but cancer, gastrointestinal disorders, infectious diseases, diseases of the endocrine system, nutritional deficiencies, psychoses, neuroses, as well as others), motor vehicle crashes, criminal justice system costs, and social welfare programs for alcohol were estimated at over $17 billion. The comparable costs for drug abuse were over $7 billion. Indirect costs were estimated in the areas of premature mortality, reduced productivity, lost employment, time lost due to motor vehicle crashes, incarceration, victim of crime losses, and (specifically for drugs) for crimes due to drug trafficking and property crimes motivated by addiction. The indirect costs attributable to alcohol abuse were over $71 billion, and over $39 billion for drug abuse, putting the overall costs to the nation for alcohol abuse at over $89 billion dollars, and for drug abuse at over $46 billion in 1980 alone.

These are incredibly high costs. Notice however, that

alcohol abuse costs the nation nearly twice as much as does drug abuse, which speaks to the tremendous problem of alcohol abuse in this country. Although youth are but a segment of the overall population, they are at the peak years for alcohol and drug use. (Recall that levels of drug and alcohol increase the first few years following high school, and then start to recede.) Therefore, the economic costs of alcohol and drug abuse attributable to youth are disproportionally high.

It is very important to note that cigarette use -- a drug which is often forgotten in terms of the consequences of its use -- will undoubtedly take the lives of more people than alcohol and drug abuse combined. Cigarette smoking is clearly established in the adolescent years; very few individuals take up the smoking habit after leaving high school, and virtually no one starts to smoke at 21 years of age or older. Further, cigarette smoking has been clearly shown to be strongly associated with all forms of illicit drug use. Young people tend to go through a predictable sequence of drugs before moving into harder drugs, starting with cigarettes, moving to alcohol, then marijuana, and then onto harder drugs.

There are additional human costs attributable to alcohol and drug abuse which are not economically based. For example, alcohol and/or drug abuse invariably leads to family disruption and dysfunction. There has been a growing body of literature over the past decade pointing out that the alcoholism of one family member deeply affects all family members. Further,

research indicated that the greatest single factor in predicting alcoholism is the presence of biological parent with alcoholism. In fact, parental alcoholism has been linked to drug abuse as well as to a variety of mental health problems in the children of alcoholics. Therefore, abuse takes a heavy toll on the family with an abusing member, not only in terms of current disruption of family functioning, but potentially on future generations.

The costs to our nation in any single year for alcohol and drug abuse is staggering not only economically, but in terms of the toll it takes on human lives -- both physically and mentally. Certainly the costs in terms of crime appear to be significant, not only involving those factors already mentioned, but also including the corruption of public officials. This is not limited to our shores either, as the illicit drug supply in our nation in dependent upon the production of drugs and transshipment efforts of other countries. In those countries, the costs can be devastating.

Economics of Drug Distribution

The profit level in the illicit drug market is enormous; many scrupulous, otherwise law-abiding citizens, have found they too, have their price. Poor and developing countries have perceived the extreme profitability of the drug market; and while perhaps few governments have openly supported drug production and exportation, they may be more aptly described as guilty of not so benign neglect. Thus, the high profits available in the illicit drug trade have engendered a steady flow of producers and

traffickers. History has shown that when production of drugs is curtailed in one geographic area, a replacement producer rapidly begins to fill the void. Further, even if it were possible to stem the flow of illicit drugs into the U.S., synthetic analogs offer an alternative which would also prove difficult to control. The U.S. has concentrated most of its monetary resources in the war on drugs to curtailing the supply of drugs, although national surveys have indicated that the perceived availability of drugs has not changed much in recent years. Since little progress seems achievable from supply-side reduction techniques, efforts should be concentrated on curtailing the demand for illicit drugs.

Traditionally, society has attempted to reduce the demand for drugs through legal deterrence; that is, through laws prohibiting drug possession and sales, and ascribing harsh penalties for transgressions of the laws. However, the problem with relying on legal deterrence is that the detection rates are very low.

More recently, urine testing has been proposed as a means to monitor compliance. However, not only do the different types of urine testing mechanisms vary widely in terms of accuracy, but there is much debate over whom, and at what point, people should be tested. Most seem to agree that individuals in positions which are accountable for safety (i.e., airline pilots) should be tested. However, should urine tests be conducted without "probable cause," i.e., as a condition of employment, or at

random? Also, some drugs, most notably marijuana and PCP, remain in the body for up to a month. Would a person who used marijuana 2 weeks prior to being tested still be considered impaired? Current technology is not capable of pinpointing the quantity of the drug consumed, or when it was consumed.

The alternatives mentioned thus far all have to do with negative consequences -- dealing with apprehension and punishment. However, the most promising approach to demand reduction is in changing the attitudes, beliefs, and values associated with drug use. Under the rubric of prevention, three major classifications can be identified: primary prevention (which means preventing drug use before it ever occurs), secondary prevention (early intervention in the drug using process before chronic use or dependency occurs); and tertiary prevention (which is essentially treatment of those who have developed a drug abuse problem).

Of the three approaches, treatment has been the dominant method of "demand reduction" used to date. However, treatment may be viewed as the failure of the other two interventions t work; or to even be tried. Currently, treatment is not only costly, but has proved largely ineffective. Although we have a long history of drug abuse in this nation, little money has been devoted to researching effective treatment or prevention modalities. Most programs are based on "good intentions." While this is a starting point, with our long history of drug abuse, it

is a travesty that we still find ourselves at the starting point. Part of the problem is that the amount of money supporting prevention and treatment initiatives has been less than one percent of that devoted to interdiction. Research into ways of preventing drug abuse must be given a higher priority if we are to have any hope of solving our drug problem.

Summary and Conclusions

Although there are signs that the drug epidemic has begun to recede, we still have a long way to go to return to pre-epidemic levels of drug use among our young people. This epidemic has been with us for two decades. Drug use has evolved from a deviant, isolated behavior believed to be primarily practiced by people on the fringes of society, to a behavior which is "normal" among the nation's youth. Experimentation with illicit drugs is normative among youth, judging by the fact that over half (57%) of young people have tried one or more illicit drug by the time they graduate from high school. Forty-two percent have used an illicit drug within the past year. Although the epidemic appeared to spring up almost overnight, it is doubtful that it will disappear nearly so quickly. Further, it's not only the illicit drugs that are the problem. Alcohol abuse costs our nation twice as much as drug abuse, yet because it is a legal drug, alcohol is generally viewed as more acceptable by both adolescents and the general population. Parents are often pleased that their child is only involved in alcohol use, and not

drugs. But alcohol is a drug and is abused by more of the nation's young people than any other drug. Alcohol is especially dangerous because it relaxes inhibitions, and youth participate in risky behavior while under its influence. Considering the fact that accidents are the leading cause of death among adolescents and approximately 40% of traffic accidents among youth are alcohol related, it is apparent that alcohol is far from innocuous drug.

Since adolescence is clearly a critical period for the establishment of drug-using behavior, it is imperative that we educate and confronte our youth with the hazards of drug use (including tobacco and alcohol) at early ages. Further, it's not enough to rely on our good intentions to curb the drug problem--the good intentioned programs and messages we have given to young people during the past two decades have done little to reduce the size of the epidemic. We can maintain our band-aid approach to the drug problem, but we need to recognize that truly effective prevention and treatment programs will take a commitment to long term, high quality research. Without researching the effectiveness of prevention programs, they will offer a haphazard solution at best, and our drug problem can be expected to continue. We have evidence of the success of these types of programs. The tobacco smoking prevention efforts of schools have paid off with a reduction of one-third in the number of daily cigarette smokers among our young people since the mid-1970's. It is time to take a hard look at the youthful drug epidemic, and

embark on a long-term campaign capitalizing on research to ascertain the elements of effective prevention and treatment programs, so that we can really start to win our war on drugs.

THEORIES OF DRUG AND ALCOHOL ABUSE

Chapter 2

INTRODUCTION

Why would a member of the Kennedy family, a young man whose father was Attorney General of the United States, choose to get involved with drugs, causing him to die at a very early age of drug overdose? It just doesn't seem to make sense. Why would a young black man who grew up on 112th Street in Central Harlem, perhaps the highest drug abusing neighborhood in the country choose never to use drugs of any kind. It doesn't fit our stereotype for someone with almost everything going against him to have a masters degree from Columbia and be a very creative teacher.

The year 1986 was a turning point in public awareness about drug abuse and particularly cocaine. In our sports oriented society a young man who had just been drafted by the World Champion Boston Celtics died of a drug overdose. Len Bias had a golden future ahead of him -- the American Dream just waiting to come true; destroyed by his decision to party with cocaine. A tragic loss.

How many times have we heard it, even said it ourselves-- why do they do it? It doesn't make sense. It's just not rational!

Why DO people use drugs? This is a question that has occupied a great deal of time among researchers, public policy makers, the news media, and concerned parents, teachers, and youth. There is no shortage of answers; practically everyone has an opinion and, usually, a favorite "causal" factor or set of factors they believe "explains" why people use drugs.

These answers to the question of why people use drugs constitute our "theories" about drug use. Some are quite sophisticated and have been subjected extensively to statistical testing. Others are quite simple, not much more than an observation that seems to be "true" in most instances. Both are valuable sources of information that seek to explain the "why" of drug use.

PURPOSE OF CHAPTER

The purpose of this chapter is to review some of these "theories" about why young people in our society begin to use drugs, and why they continue to use them, sometimes excessively. The goal is to explain the theories in common language rather than to report in detail all of the complexities sometimes found in the "scientific" literature.

This is not to suggest that the statistical testing of theories is unimportant. To the contrary. Without such tests there would be no way to evaluate the effectiveness or efficacy

of the theories.

The existing theories can be organized into several categories. First, some seek the major explanation for drug use in societal level forces over which individuals have little or no influence. Second, some theories focus attention on the environmental context within which individuals grow and learn (e.g., the family, school, neighborhood, and peer groups) and how those forces influence a person to use or not use drugs. Third, some theories focus on forces that exist primarily within the individual, forces that exist at the attitudinal, the personality, or the biological levels.

All of our theories of drug use are limited and in the formative stages of development. None is considered robust enough to explain why some decide to use drugs while others with similar characteristics choose never to use drugs. Therefore, the theories discussed below should be viewed as beginning explanations, not "the" answer to why young people in this society use and abuse drugs.

USE, ABUSE, AND DRUGS: IMPORTANT CONCEPTS

It would be inappropriate to begin a chapter explaining why people use drugs without first setting some important boundaries on the discussion. Of most importance, use should be distinguished from abuse. Use refers to the first time a drug is

euphoriant, product tolerance, and cause withdrawal signs to occur when use of the substance is withdrawn. This means that the so-called "legal" drugs are included (e.g., tobacco products, alcoholic beverages, prescription medicines used nonmedically). In fact, in most jurisdictions in the United States, it is illegal to sell minors either alcoholic beverages or tobacco products. Thus, for our young people, these two widely used legal drugs are illegal.

AVAILABILITY: A KEY EXPLANATORY FACTOR

The first set of theoretical ideas about drug use are not anchored specifically in the individual -- they exist beyond him or her, at the societal level. Thus, these social forces help make an individual "vulnerable" to using drugs.

A key factor in explaining the levels of drug use that exist among the young people in our society is "availability." While it seems as obvious as the nose on our face, if drugs were not available, young people wouldn't start using them. This is the unguarded and full cookie jar notion. It is difficult to resist the temptation. The greater the availability, the greater the likelihood of use.

There is support for this notion. For example, in the District of Columbia, all persons arrested are tested for the presence of drugs in their urine. For some time now juveniles

taken; the dividing line between never having used a drug and having tried it. Existing theories are directed almost entirely at "initiation or onset" of use and what distinguishes those who have used from those who have not used.

Some young people never try drugs. For whatever reason(s), they make a commitment to remain entirely drug free and are successful at fulfilling that commitment. Some young people try a drug and then choose not to continue using it: often referred to as minimal or experimental use. Others continue using drugs after a period of experimentation and may progress toward excessive use of that drug or from that drug to use of other drugs.

There is not a great deal of agreement on when use becomes abuse. For your purposes here, an assumption will be made that any use of a drug for nonmedical reasons is abuse. After all, the purpose of this chapter is to review existing theories about why young people, all of whom are still developing physically, socially, and mentally, choose to use. Excessive use will be referred to in terms of the extent and frequency with which a drug is used.

Drugs is a term that is often a buzz word for "illegal" or "illicit" substances for everyone; substances such as marijuana, cocaine, and heroin. In this chapter a more inclusive definition is used. Drugs refers to all substances that are psychoactive,

entering the Juvenile Justice system in Washington were most likely to have been using marijuana and PCP. In Washington, it has been common practice to lace marijuana joints with PCP. Thus, the metabolites of both drugs appear in the urine when the person is tested upon entry into the juvenile justice system. The percentage of such youth using these drugs has not changed much over a number of years. Quite recently however, the percentage of youth testing positive for the presence of cocaine in their urine has gone up dramatically. In fact, in 1987, 25% of all juveniles arrested in Washington, D.C. had the metabolites of cocaine in their system at the time of arrest. The availability of marijuana and PCP do not seem to have changed. Therefore, the most plausible explanation is a large increase in the availability of cocaine, particularly in its smokable form, crack cocaine.

Information from police seizures of drugs, drugs implicated in visits to emergency rooms and overdose deaths, as well as information obtained from undercover operations throughout the District of Columbia suggest that cocaine is widely available and relatively cheap. The "relatively cheap" concept is important and fits "hand-in-glove" with the concept of availability.

Drugs are consumer products. They are marketed in ways similar to other consumer products and thus are subject to some of the same market forces. When any product is marketed, including a drug such as cocaine, supply and demand operate

together. If the supply is low the price is high, the pool of potential buyers/users is limited -- most cannot afford it. In addition, under such conditions, the purity is also low. On the other hand, when the supply is high the price drops, the purity increases, and the pool of potential users increases. This is exactly what happened in the United States in the late 1970s to mid-1980s. Making matters worse, a new, less expensive, high purity, smokable form of cocaine was introduced. Crack is now widely "available" in this country's largest cities and this factor, alone and in combination with other important factors, accounts for the unacceptably high level of drug use among youth in the United States.

FAILURE OF SOCIETAL INSTITUTIONS

The institutions of every society (the family, religion, education, government, communications, the legal system, etc.) perform important functions. What they do sets the tone for the entire society. These institutions or systems operate at the societal level but also have counterparts in each community. These systems are responsible for setting and enforcing standards of conduct in each community; for defining what is right and wrong, for protecting those who are unable to protect themselves, for helping us all be better and more caring citizens than we might otherwise be.

FAMILY SYSTEM FACTORS

Many believe that these systems have broken down, that they have failed in their missions. This is considered one of the causes of increases in drug abuse among our youth. For example, there has been a marked increase single parent families; from ___% in 1975 to ___% in 1985. At the present time over ___% of all children under the age of 18 live in single parent families. The rates are much higher for black and Hispanic youth than white youth. Most of these single parent families exist because of the high divorce rate. Divorce is the single largest cause of poverty status for children in our society. Most children in such situations live with their mother who must work often long hours just to make ends meet, usually with no help at all from the father of the children.

During child's early years this means reduced opportunities for positive socialization, reduced amounts of time with the available parent, and the negative effects of poverty. With regard to both psychological well-being and the ability to adapt socially in school, children from single parent homes seem to be at a disadvantage. When those children are followed into adolescence, an important conclusion emerges -- it is not father absence, but rather mother aloneness that is associated with an increased likelihood of using drugs.

Structural conditions like the number of adults present in the home are not isolated from what actually occurs in the home-

- the socialization and family management process. Some theories of adolescent drug use emphasize such factors as closeness to mother and father, the degree of parental supervision, warmth versus coldness of the relationship between parents and child, the degree to which the parent(s) knows the child's friends, and disciplinary styles (i.e., authoritarian, authoritative, or permissive). Some theories about why persons go on to use and abuse such drugs as heroin have identified early childhood trauma (i.e., physical neglect or abuse, sexual abuse) as an important predictor of later drug abuse.

It is important to note that a renewed interest in family factors in explaining drug use and abuse coincides with newly rekindled interest in these types of factors explaining juvenile delinquency and subsequent adult criminality.

NEIGHBORHOOD DISORGANIZATION AND POVERTY

In neighborhoods characterized by a high rate of poverty, a large percentage of single parent families, a large number of family units on welfare, high rates of unemployment and crime, there is no organized force or presence within the community that can credibly encourage individuals to express positive attitudes or behavior. The world in which these people live is dangerous and those with the most brute power or obvious deviance are the only ones who seem to possess the material resources we all want (i.e., cars, money, a ticket out of the slum). The people who

try to "be good" don't seem to make it. The "tough guys" do. In order to survive and thrive, the message is clear -- manipulate the systems and watch out for yourself. The self-centeredness and the lure of hustling are associated with drug abuse.

Among all children under the age of 18, approximately 1 in 5 live in families classified as poor. However, poverty is far from being equally distributed. Imagine visiting a school and having the principal show you three lines of children/youth. In one line all are white. The other two lines consist of children/youth who are black and Hispanic. Each line contains 100 children. The poor children are asked to step forward. Sixteen of the white children step forward. However, 43 of the black and 38 of the Hispanic(?) children step forward. This occurs in the "richest" nation on earth. But, what is poor? It is sleeping 3 children per bed, never having new clothes, and being hungry most of the time. It is being embarrassed when you go to school because you don't have any underwear on and don't have a chance to get any.

Children who are poor have a higher chance of becoming drug abusers than their more fortunate classmates because of the hopelessness they feel being trapped at the bottom of a society with virtually no chance of getting out. It is feeling a need to escape. It is being tempted to deal drugs because that is the only way to make enough money to buy some of the nicer things of life.

Simply put, the neighborhoods where poverty is rampant are breeding grounds of discontent and incentives for "making it" outside of the legitimate system because "making it" within the system seems impossible. Blunted and blocked opportunities for legitimate activity seem to go hand in hand with seemingly open opportunity for illegitimate activities, including drug use and drug trafficking.

EDUCATIONAL SYSTEM

Some years ago songwriter Paul Simon wrote about all the useless things he had learned in high school, but about being able to read the writing on the wall. Among 25-29 year olds nationally, 14% of white males and 13% of white females did not complete high school. The respective rates for black males and females are similar, 15% and 18%. However, among Hispanic males and females 25-29 years old, 41% and 39% respectively did not complete high school. These are "national" figures about dropping out. In some inner cities as well as depressed rural counties, the dropout rates are close to 7 out of 10.

The ostensible function of schools and education is to train youth to serve as citizens and workers in society. However, the educational system in many central cities is able to retain only one-half of its students until high school graduation. Those who do remain in school often must contend with a lack of adequate

security and a shortage of the resources necessary to provide quality education and instruction. Those who drop out are usually in even worse shape. The educational system cannot perform its functions if the students drop out and dropping out is related to drug abuse. No one really knows the extent to which failure to achieve in school leads to drug abuse or drug abuse leads to failure in school. Regardless of the direction of the influence, there are significant difficulties associated with an educational system that is not able to do its job and students who are being short changed by that system in preparing them for life in the "real world."

The Family, the School, and the Neighborhood, these systems have traditionally passed on the "culture" to new generations. They have been instilled with the good old American values of individualism, the importance of honesty and integrity, and the ethic of work for the sake of making a contribution. While these values are subscribed to by large percentages of our population, material success and "making it" are also salient values that influence the choices made by young people in our society.

The family, the school, and the neighborhood are also important contexts within which opportunities are perceived to either exist or not and contexts within which young people feel accepted and wanted or not. When the opportunity structure does not seem favorable and one seems to be getting more punishments than rewards, there is a tendency to look for better and

different experiences. Drugs provide a "way out."

INDIVIDUALS WITHIN DIFFERING CONTEXTS

There are a number of theories about why people begin to use drugs that emphasize individual level characteristics as the principal causal factors in adolescent drug use. These can be organized into the several general categories of theories.

STAGES OF DRUG USE

Perhaps the most widely cited approach to understanding initiation of drug use was created by Dr. Denise Kandel at Columbia University. In studying a group of students over time she identified several "developmental stages" of drug use. Everyone starts at the same point -- as a non-drug user. Some young people choose to remain drug free all of their lives. Among those who choose to use drugs, regardless of the reasons for using, the stages of initiation are essentially the same.

1. Use of beer or wine
2. Use of cigarettes and/or hard liquor
3. Use of marijuana
4. Use of other illicit drugs such as heroin or cocaine

According to Kandel, the first drugs used by most people are "licit" or legal. Beer or wine is usually the first drug used and may be the only drug ever used. Some progress to trying cigarettes and/or hard liquor. For many in our society, the

legal drugs are the only drugs ever used. For some, there is experimentation with "illicit" drugs. The first illicit drug used is almost always marijuana. While lifetime rates of use of marijuana are high -- large percentages of youth try this drug; most do not continue to use it. However, some continue to use marijuana and progress on to use of other illicit drugs such as heroin or cocaine.

The essential point of Kandel's developmental stages theory is that use of cocaine or heroin is almost always preceded by prior use of the drugs at stages 3, 2, and 1. Persons who use marijuana have almost always used the licit drugs prior to trying marijuana. In other words, there are distinct stages of drug involvement -- patterns of initiation that seem to occur regardless of a person's sex, race or ethnicity, place of residence, etc.

There is controversy over whether use of drugs at prior stages of development "causes" use of drugs at latter stages. The disagreement occurs because of different definitions of and approaches to demonstrating causality. To deny the very strong correlation between use of one drug and use of other drugs would be to ignore one of the most widely replicated findings in the drug field. For example, in a nationwide study of youths 12 to 17 years old, 47.7% who had smoked any cigarettes during the past month also reported past month use of marijuana. Among those youth who had not smoked cigarettes during the past month, 5.5%

reported using marijuana in the past month. This is a large difference and demonstrates the strength of the correlation between use of two drugs, cigarettes and marijuana.

Richard Jessor and John Donovan, psychologists at the University of Colorado, have suggested a new stage exists between use of marijuana and use of other illicit drugs. That stage is problem drinking. When one makes the transition from the so-called legal drugs to marijuana, use of alcohol does not cease. In fact, as Jessor and Donovan suggest, the alcohol use often continues and becomes more excessive. In a study of drug use among women, Kandel and her associated identified nonmedical use of prescription drugs as a possible stage between marijuana use and use of other illicit drugs.

What the developmental stages model really demonstrates is considerably more important than the sequential nature of initiation into various drugs. It demonstrates that most people are multiple drugs users, and that progression involves more than adding a new class of drugs to one's chemical repertoire. It involves a multiple interactive potential from a pharmacological perspective. Simply put, initiation into drug use is a very patterned and systematic, not a random process. It is inappropriate to focus our attention on just the illicit drugs; the licit drugs play an important role in facilitating involvement with the illicit drugs. Finally, it is important to recognize that most people who use the illicit drugs are

"multiple" drug users, not specialists in one substance.

PROBLEM BEHAVIOR THEORY

Richard and Shirley Jessor developed a comprehensive model of adolescent drug use which they labeled "problem behavior" theory. A central assumption of this theory is that there are a number of problem behaviors that occur first during adolescence-- cigarette smoking, precocious sexuality, problem drinking, use of marijuana and other illicit drugs, excessive eating, stealing, aggression, drinking and driving, etc. In addition, these behaviors seem to cluster in the same individuals, the multiple problem youth. Furthermore, the earlier the onset of these behaviors, the greater the likelihood that a person will exhibit multiple problems during adolescence.

Jessor and Jessor argue that there is a "deviance proneness" in youth that is detectable very early in their lives. The causes of drug use among youth are thus similar to the causes of other problem behaviors -- a failure in socialization and bonding in the family and with the school and other such institutions, a rejection of conventional institutions, attitudes, and values, and association with peers who are likewise deviance prone.

SOCIAL DEVELOPMENT MODEL

David Hawkins and Joseph Weis, sociologists at the

University of Washington, have developed a general theory in that applies to deviance. It is not limited to but does include drug use by adolescents. This central concepts of the social development theory are attachment, commitment, belief, and involvement. These concepts are indicators of the degree to which an individual is "bonded" to the family, school, and peer group.

In this theory, deviance or drug use occurs when bonding to the family and school are inadequate and the peer group offers both support and rewards for involvement in deviant activities. It should be noted that the family and school are not passive actors in this process. Hawkins and Weis suggest that family management skills play a crucial role. Children are more likely to become drug users if their families are unable to control the time and activities of the children, unable to resolve conflicts, and the parental figures have inadequate interpersonal communication skills. The social development model is clear that parenting style is important both in terms of exercising discipline as well as administering rewards.

Simply put, the stronger the bonds to conventional forces in society the less the likelihood that drug use will occur. The weaker the bonds and the less adequate the family in helping the youth through the turbulent waters of adolescence, the more likely that child will choose to use drugs. An important point raised by this theory is that while the family and peer group are

often in competition for the youth's loyalty, seldom is it an either/or situation. The family continues to play a role even when the youth is embedded in a peer group where drug use is pervasive, albeit a less visible and influential role.

FACTORS INTERNAL TO THE INDIVIDUAL

Although each of us is similar on certain characteristics (e.g., sex, race/ethnicity, rural or urban residence, region, religious preference, etc.), each of us is unique. Parents with multiple children will tell you with no hesitation -- all of my kids are different. It is almost as if they were from different planets. Teachers and others who deal with children focus on the differences more readily than the similarities. The differences are more often than not based on something that is not visible--internal to the individual.

SELF-DEROGATION THEORY

Howard Kaplan, a sociologist at Texas A & M University, has developed a theory that focuses attention on the self-concept. More specifically, he suggests that a principal cause of involvement in drugs is a "poor" self-image or what he calls "self-derogation." Those who are high on self-derogation are always putting themselves down, pointing out their weaknesses and flaws instead of looking at their strengths. These people have a tendency to extrapolate their view of themselves to those around

them. They assume that because they don't think very highly of themselves, neither do important or significant others in their environment. They feel rejected and thus reach out to drugs and drug using peers. According to Kaplan, the drugs heighten self-esteem or lessen self-derogation. Thus, self-derogation is a causal factor in the onset of drug use, at least according to Kaplan.

SENSATION SEEKING

Have you ever noticed infants at swimming pools. Some very young children are set down by their parents on a blanket. Before the parent can secure the four corners, some kids are off the blanket and heading for something that has caught their eye. Other children can be set down on the blanket and hardly ever move. Some of us love the thrill of roller coasters -- the bigger and more complex the better. Others of us avoid them like the plague. Some are risk takers, others are not. Some require the big scare while others don't like any kind of change.

All of us have needs for stimulation; for some this need is stronger than for others. This observation is at the heart of an hypothesis that seeking new or different sensations is a principal causal factor in drug use. After all, it is the drug's "psychoactive" effect that people seek -- its effect on the brain and the person's perception of reality. If drugs didn't affect the brain, they wouldn't be used. In fact, the knowledge that

the brain has it own reservoir of natural painkilling drugs is considered further evidence of the needs some have for sensation seeking and the possible/probable role this need has in drug experimentation.

MULTIPLE RISK FACTOR THEORY

Over the past two or so decades a great deal of effort, study, and thought have gone into gaining a better understanding of the correlates, causes, and consequences of drug use. Considerable progress has been made. However, we are still quite a distance from a dominant theory which most experts agree contains "the" major factors responsible for drug use. For the present, we must be content with a list of factors that seem to be consistently correlated with drug use, regardless of which groups or samples are being studied.

This has led some to support a multiple risk factors model. Michael Newcomb and Peter Bentler, psychologists at UCLA, and the social science research team of Helene White, Robert Pandina, Erich Labovie, and Brenna Bry at Rutgers University have been most prominent in advocating this theory.

There is actually a substantial amount of agreement on what risk factors belong in the list. The factors that "predispose" youth to initiate drugs are listed below:

- parental drug use
- perceived adult drug use
- peer use of drugs
- poor grades in school
- poor relationships with parents
- low self-esteem, depression, psychological distress
- unconventionality and tolerance for deviance
- sensation seeking and the desire for novel and unusual experiences
- low sense of social responsibility
- lack of religious commitment
- a lack of purpose in life
- early alcohol and cigarette use

This is obviously not an exhaustive list. The 1986 Anti-Drug Abuse Act contained another list of risk factors that are more social, environmental, and behavioral than psychologically oriented. That list includes:

- Economically disadvantaged
- Runaways or homeless youth
- School dropouts
- Youth who are pregnant
- Youth with mental health problems
- Youth who have attempted suicide
- Children of substance abusing parents
- Victims of physical, sexual, or psychological abuse

- Youth involved in violent or delinquent acts

A critical assumption of the multiple risk factors model is that it is not so much "which" of the risk factors are present, it is the total number of risk factors that predispose one to use drugs. The higher the number of risk factors, the greater the likelihood one will become a drug abuser.

DISCUSSION

In this rather brief chapter, an attempt has been made to describe in everyday, jargon free language, the content of the major theories that exist to explain why some people decide to use drugs and others with similar characteristics choose not to use drugs.

At the present time there is only an emerging consensus about what are the major predictors of drug use, no consensus is in sight on one or two dominant theoretical frameworks. It would be safe to say that the more we learn, the more we appreciate the complexity of the behavior of using drugs.

The risk factors described above provide a succinct summary of what is known at the present time. The conclusions that can be reached are rather general at present.

First, while there is a period of maximum vulnerability, all

of us may be considered at risk to use drugs. In fact, given the lifetime prevalence rates for use of alcohol, cigarettes, and marijuana, it is safe to say only a small proportion of each birth cohort is able to remain totally drug free throughout a lifetime.

Second, while each academic discipline is making progress toward understanding the "why" of drug use, ultimately our theories must contain factors that are biological, psychological, social, and cultural in nature. Drugs have pharmacological and biochemical properties and influence the body and brain in certain ways. Drugs have an impact on our psychological well-being and influence the ways we express our personality. Drugs are used in social settings and those settings are determined by the roles we play and the social systems within which we function. Finally, drugs, their availability, and the extent to which they are attractive to us are affected by the cultural traditions we have inherited and developed. Let us not forget that all of us have customs and traditions that affect how we see the world.

Third, each of us is alike. We are bound together by our similar characteristics and experiences because each of us goes through a societally determined set of age-graded systems. At the same time, each of us is different, unlike anyone else who has ever lived. We all come into the world in the same way and each of us has essentially the same biological equipment, each

part of which operates in basically the same way. Even so, some are created more equal than others and those differences affect the opportunities we have to grow and change and prosper, or not. Drug use is just one behavior that fits together with a host of other behaviors, some of which are problematic, some of which are not. We need to understand the "deviant" in order to understand the conventional, and our theories must allow us to understand the conventional so that we might better understand the deviant.

THE SYSTEMWIDE MODEL

Chapter 3

Introduction

The problem of drug and alcohol abuse by young people is pervasive; it affects the mission of our schools, the safety of our streets and highways, the ambience of our neighborhoods, the sanctity of our homes, and even the health and lives of our children. As it effects are widespread, so are its causes, and any approach to an effective strategy for preventing or treating substance abuse must take into account the broad social, cultural and individual factors associated with the use of alcohol and other drugs. Those conditions, called "risk factors," are fully discussed in a previous chapter.

A focus on risk factors exposes the multi-dimensionality of the youth drug, alcohol, and impaired driving problem. When communities come to understand that illegal drug use by young persons is correlated with such things as family life, school situations and environmental conditions -- to name only a few-- they begin to take a more differentiated view of the problem. Their next step is to examine existing approaches, determine the extent to which current policies and programs conflict with one another in philosophy or objective, and begin to design a more rational and comprehensive strategy.

This purpose of this chapter is to encourage local jurisdictions to view the problem of substance abuse as "systemwide," meaning that it involves all segments of the community, and therefore requires the adoption of a systemwide approach for dealing with it. The approach -- a "systemwide strategy" -- is based on principles of information sharing, coordination of activities, accommodation of new initiatives, and integration of services. Of course, it is one thing to design a coordinated strategy and another to implement it; the chapter includes, therefore, a design for an intensive planning and policy-making process which will help a community get started.

Many communities throughout the United States already have recognized the need for developing new programs and new methods of service delivery and have made great strides toward creating more comprehensive and coordinated systems. The approach described here builds upon and in many ways emulates the innovative efforts undertaken in those communities, but it is unique in several important respects:

-- First, the strategy focuses exclusively on illegal drug and alcohol use by young persons.

-- Second, the strategy is aimed at youth who, because of their living situation, school record, prior contact with the juvenile justice system and previous use of drugs and alcohol, are considered to be at the greatest risk of substance abuse.

-- Third, the strategy is anchored in the juvenile justice system, and capitalizes upon the convening power and dignity

inherent in the office of juvenile court judge. It also draws upon the judge's power to marshal and even create resources on behalf of the youth over whom the judge has jurisdiction.

-- Fourth, the strategy proposes approaches based on risk factors that appear to be antecedent to drug abuse, as well as protective factors that appear to insulate youth from deep involvement with drugs or alcohol.

-- Fifth, the strategy incorporates a facilitated planning process, involving public agency heads and essential staff, leading to an identification of problems, needs, solutions, and action plans.

These areas of emphasis and concentration place parameters on the conduct of the strategy and have implications for the kinds of agencies involved and the types of activities, policies and programs that are pursued. A systemwide strategy with the juvenile justice system at its core would be constrained in some areas but extraordinarily powerful in others: juvenile court judges have the authority to mandate drug and alcohol treatment for adjudicated offenders, but they hold no formal power over those who never come into contact with the system. A review of the activities of the juvenile justice system may facilitate an understanding of its role.

Role of the Juvenile Justice System

Although underage drinking, use of nonprescribed drugs and driving under the influence are by definition crimes, the juvenile justice system has developed very few standardized mechanisms for dealing with substance abusers. One reason is that until the 1970s drug abuse was seen as relatively rare among juveniles -- even juvenile offenders; another reason is that while drug trafficking always has been considered a serious crime, drinking and drug use typically have not. Often, substance abusers were shunted away from the juvenile court and referred to other agencies for counseling or treatment.

Today -- with youthful substance abuse viewed as one of the country's top problems -- juvenile courts are far more willing to accept responsibility for users and hold them accountable. Moreover, judges now recognize that the majority of their cases are involved in some manner with illegal substances, and they see effective court action as ultimately reducing caseloads. For these reasons, the juvenile court and the juvenile justice system generally must play a central role in the development of a systemwide strategy.

All of the activities of the juvenile justice system are subsumed under four categories: prevention, intervention, adjudication, and supervision. To avoid confusion, it is important to note that this classification is similar to, but not congruent with, the "continuum of care" categories used in public

health: prevention, intervention, treatment and aftercare.

PREVENTION: In juvenile justice, "prevention" refers specifically to delinquency prevention and therefore to activities designed to reduce the incidence of delinquent acts. To the extent that delinquency and drug abuse are related and stem from the same set of risk factors, activities aimed at the prevention of delinquency usually impact drug abuse as well.

Conventionally, prevention activities are directed at youth who are not being dealt with as the result of contact with the juvenile justice system. However, elements of prevention programs frequently are found in activities subsumed by the intervention, adjudication and supervision categories since an obvious goal of the system is to reduce recidivism; that is, to prevent a youth from engaging in additional delinquent acts.

One approach to prevention is to address the known causes and correlates of delinquency and substance abuse including school failure; lack of attachment to cultural institutions, such as the school, family or community; low self-esteem; association with delinquent peers; and a history of abuse and neglect. Another approach is to address environmental conditions that result in inappropriate labeling or that deny youth the opportunity to develop social, occupational, and other types of skills or competencies.

Activities, policies or programs designed to prevent drug abuse and delinquency clearly fall within the purview of a multiplicity of agencies, acting individually or in concert. For example, programs aimed at reducing school failure may involve welfare, housing, recreation, employment and mental health agencies in addition to schools. Efforts to address destructive environmental conditions may involve police and public health departments in addition to public housing authorities. Because of the pervasiveness of drugs and alcohol, virtually all agencies could have an active role in prevention activities.

INTERVENTION. An "intervention" is any justice system activity which takes place after arrest and before a formal hearing in front of a judge or juvenile court referee. The opportunity for discretion at this stage in the juvenile justice system is greater than at any other point, and it is crucial for the success of a systemwide strategy that youth with drug and/or alcohol problems not be allowed to "fall through the cracks" or be inappropriately referred.

Discretion originates with the arresting officer, who has the options of (1) lecturing and releasing to parents (often done in cases of underage drinking); (2) diversion to a youth services bureau for voluntary participation in counseling and/or referral to another agency; or (3) referral to juvenile court. It is estimated that nationwide approximately half of all arrested youth are referred to court.

Further discretion is exercised at the juvenile court intake stage. The options here -- exercised variously by prosecutors, probation officers or a special court intake unit -- include (1) filing of a formal petition and, consequently, continued court processing; (2) dismissal, meaning that the youth is released and no further action is taken; (3) diversion to a social services agency; or (4) delayed filing of a petition pending satisfactory completion of informal probation.

Clearly, an effective systemwide strategy must include all of the actors involved in the intervention process -- police, prosecutors, court intake units, youth service bureaus (where they exist) and community social service agencies. All of these actors must be made aware that intervention with substance abusers is a priority, and they should be trained and given the tools to identify users and others at high risk. An ideal tool would be a carefully tested and validated screening and assessment instrument designed for administration at the various "gates" of the intervention process. The instrument would be structured to allow for quick and relatively unobtrusive screening at the earlier gates and for more careful diagnosis as the juvenile penetrates deeper into the system.

Careful screening and assessment should result in a more accurate evaluation of the offender's problems and more appropriate sanctioning. It should prevent substance abusers from slipping out of a the system and provide judges and probation officers with better information for decision-making.

ADJUDICATION. It is during the adjudication process that the juvenile court judge finally steps into the picture. The adjudication process is divided into two stages: the adjudicatory hearing, or "trial," and the dispositional hearing, or sentencing. Usually, the two hearings take place at the same time; occasionally they are "bifurcated" into two separate hearings. Always, they are private, and closed to the public on the theory that disclosure of the youth's identity is injurious to his or her welfare.

In practice the adjudicatory hearing is bypassed in up to 95 percent of the cases because the offender admits to the facts stipulated in the petition. Meanwhile, a probation officer collects information on the youth's background, progress in school, living situation, prior record and so forth for presentation of a "social history" report at the dispositional hearing.

The decision made at a dispositional hearing is a juvenile court judge's single most important duty. At that point the judge, quite literally, has the fate of the defendant in his or her hands. The decision would appear to involve a choice between probation and incarceration, made by the judge on the basis of the offender's crime, prior record and perhaps age. In actuality

it is much more complex, and rests on the judge's perception of the offender's likelihood of rehabilitation, amenability to treatment, social, medical and mental needs, and availability of resources to meet those needs. In addition the judge must weigh the probability of harm to the offender against the public's right to safety.

How well judges perform their duties depends, to some extent, on their sensitivity to the needs of offenders and their knowledge of the law. It also depends upon their knowledge of available resources in the community and their own ability to advocate for new or better resources.

The central role of the juvenile court judge in a systemwide strategy to curb youthful substance abuse is obvious. The judge is the focal point of the juvenile justice system and the one person to whom the entire system must respond. Moreover, the judge's power to marshal and even create resources on behalf of those under his or her jurisdiction is awesome. By exercising leadership and exerting pressure on the institutions in the community, a judge can virtually ensure the success of a systemwide strategy.

SUPERVISION. As measured by the calendar, the supervision stage is the longest in the juvenile justice system. It begins immediately upon removal of an offender from the courtroom after disposition, and includes probation, incarceration and parole. One way to view supervision is in terms of levels or intensity, which may range from essentially none, in cases of "paper probation" for offenders at very low risk of recidivating, to total, in cases of confinement of serious and repetitive offenders in secure institutions. Another differentiating characteristic is whether supervision takes place in a residential or nonresidential environment.

Probation is always accompanied by terms or conditions, usually simple admonitions to stay out of trouble, avoid other delinquents, attend school, and obey their parents and teachers. However, there are virtually no limits on the conditions judges may set on probation -- so long as they are within the offender's ability -- and increasingly probationers are being required to pay restitution and perform community service. Lengths of probation vary, but for juveniles probation typically averages about six months.

Depending upon the location of the jurisdiction and availability of facilities, juvenile offenders may be incarcerated locally, in a county institution, or placed in the custody of a state agency for confinement in a state institution. Generally, only the most serious offenders are packed off to the state, where, in many states, they may remain in custody until they become adults.

Offenders who are released prior to the completion of their full term, or prior to adulthood (in cases with indeterminate sentences) are placed on parole. Parole is similar to probation, except that the conditions tend to be fewer and more stringently enforced. Often, parolees enter a group home or "halfway house" to ease the transition between institutionalization and liberty.

Occasionally, juveniles may be required to undergo treatment for drug or alcohol abuse as a condition of diversion, in which adjudication and a police record are avoided. If the juvenile is a serious offender, or has a serious substance abuse problem, he or she is more likely to be ordered into treatment as part of a disposition involving probation or incarceration.

Again, treatment in the supervision stage of the juvenile justice system should be based on a sound assessment and diagnosis of the offender's needs. Obviously, facilities for treatment in both residential and nonresidential settings must exist; it may be one task of the agencies involved in the systemwide strategy to bring these facilities into being.

Juvenile Justice and a Systemwide Strategy

In one sense the juvenile justice system is a systemwide strategy in that it provides or at least sponsors a continuum of services for youth from prevention of delinquency through supervision of parolees from state institutions. However, responsibility for a continuum of services only implies coordination and case management; it does not guarantee them. Professionals, especially probation officers and other service-providers, have struggled with issues surrounding coordination and case management for years; many, in fact, refer to juvenile justice as a "non-system" rather than "system."

Coordination issues are particularly nettlesome for juvenile court judges, who are constitutionally excluded from all decisions made at intake, and often, by statute, relinquish jurisdiction over offenders referred to state agencies. Offenders with drug and alcohol problems exit the system through both gates, thus frustrating the efforts of judges to impact the problem.

Implementation of a systemwide strategy would, at a minimum, enhance information sharing throughout the juvenile justice system. It may, hopefully, promote vertical case management so that a youth with a chemical problem can be correctly diagnosed in the intervention stage and tracked, so that appropriate services can be provided, through supervision and aftercare. Moreover, through closer cooperation with schools, law enforcement, recreation departments and public health agencies, the juvenile justice system's role in the primary prevention of substance abuse and delinquency could be greatly expanded.

Examples of Existing Approaches

For years communities have been launching coordinated attacks on such broad-gauged problems as civil rights, crime, economic development and, recently, substance abuse. These efforts usually take one of two forms, which we call the "task force" and "inter-agency council" approaches.

In the task force approach, individuals representing a wide range of interests come together and found a new organization to take on the perceived problem. It adopts a name, prints stationery, seeks publicity, announces its objectives and raises funds. Although it seeks cooperation and support from existing public and private agencies -- and in fact cannot survive without such support -- when it acts, it acts in the name of the task force and not on behalf of those agencies.

The inter-agency council approach, on the other hand, exists solely to buttress the activities and efforts of existing agencies. Although it may have a name and a small budget for coordination and administration activities, it undertakes no projects of its own. Rather, it seeks to stimulate, strengthen and support other programs in the community, and promote close coordination among existing agencies and institutions. A less formal variant of the inter-agency council model is the case management approach, in which a manager or case worker coordinates intervention services for specific individuals entering the system from different points.

Outstanding examples of both models have emerged in recent years to combat drug and alcohol abuse at the systemwide level. Notable task force efforts include the Hampton (VA) Intervention and Prevention Program (HIPP); the Portland (OR) Regional Drug Initiative; and the Lincoln (NE) Council on Alcoholism and Drugs. Among inter-agency councils and case management approaches are the Oakland (CA) Inter-Agency Council on Drugs; the Southeast Texas Regional Alcohol and Drug Abuse Advisory Committee (Nederland, TX); the Greater Spokane (WA) Substance Abuse Council; and the Serious and Habitual Offender Community Action Program (SHOCAP), a group of federally-funded projects located in Oxnard, CA; Jacksonville, FL; Colorado Springs, CO; San Jose, CA; and Portsmouth, VA.

Not surprisingly, spokespersons for each of the different programs are fervent supporters of their own approach. However, there is no evidence to suggest that either of the two models described above is superior. Success seems to be based on motivation (usually engendered by self-interest coupled with a recognition of a severe substance abuse problem in the community); a "culture of cooperation" and support of existing public and private agencies; a shared knowledge base produced by training or developed over time; and a clear-cut set of objectives contained in a well-developed plan for action.

The Systemwide Response Planning Process

The systemwide strategy envisioned in this chapter most closely resembles the inter-agency council model. The strategy's operating body (council or task force) would exist primarily to maximize the resources of the participating agencies, and to help them do a better job in their areas of responsibility. It would involve, at a minimum, the highest officials from the juvenile court, schools, law enforcement, mental health, welfare, youth services, and city and county government. Its initial purpose will be to identify problems, and particularly the single problem in greatest need of attention; assess resources; determine needs; and develop an action plan with concrete objectives and guidelines. Membership, it is presumed, would be based on enlightened self-interest.

Communities vary in their levels of knowledge and sophistication concerning drug, alcohol, and impaired driving problems among youth, as do individuals within communities. To ensure a high and common foundation of knowledge, as well as agreement upon basic approach, it is recommended that the chief executive officers of the agencies named above, and essential staff, participate in an initial educational and motivational meeting. The meeting would include intensive training on the general problem of youthful substance abuse, and go on to establish the framework for the systemwide strategy. In a facilitated workshop following the presentations, the community representatives would be required to reach a consensus on the three problems which they, as a group, feel are in greatest need of attention.

At the close of this first meeting, the participants would be provided with materials with which they could conduct an in-depth assessment of the three named problems. The assessment would be conducted over a period of not more than one month, using a variety of simple methods including interviews, unobtrusive observations, and reviews of official records. The group would then reconvene for a second meeting and, based on the results of their assessment, select one problem out of the three for initial action.

The Systemwide Response Planning Process (SRPP) would begin with a third meeting, held as soon after the second meeting as practicable. The meeting would have two major parts: a customized informational and skill-building training session focused on the problem selected by the group, and a facilitated planning process aimed at the development of an action plan.

The facilitated Systemwide Response Planning Process is crucial. First, it establishes the principles of the systemwide strategy:

* Information will be shared at all levels within the group

and the represented agencies with respect to prioritized target population; and practices, policies, procedures, programs and resources relating to the problem under consideration.

* The group will coordinate its efforts and accommodate the initiatives of its members. Its purpose is to set priorities, concentrate resources, and maximize the contribution of each member agency.

* Procedures will be established to facilitate integration of services for selected target populations, including prioritized service delivery and systemwide case management.

Second, the SRPP establishes a pattern for identifying problems, assessing needs, and developing an implementation plan. An example of such a process is dubbed "IDENTIFY," an acronym which doubles as a mnemonic device enumerating its steps:

I -- Identification of the problem

D -- Definition of system components (agencies) responsible for responding to the problem

E -- Enumerate policies, procedures, practices, programs and resources that presently impact the problem

N -- Needs clarification for policy, procedure, practice, program and resource enhancement

T -- Target strategies that would be effective in responding to the problem

I -- Implementation plan design defining goals, objectives, tasks and resources

F -- Focus responsibilities for implementation

Y -- Yell, if necessary, for help; make adjustments as needed

Third, the process forces the group to develop an action plan including assignment of responsibility for portions of the problem to all relevant agencies, and determination of how activities, policies, procedures and programs can be coordinated for maximum impact. For any given problem, the participants must fill in all cells of a matrix formed by plotting categories of activities (such as the juvenile justice system categories of prevention, intervention, adjudication and supervision, or the health system's continuum of care categories) against the questions of Who does What, When, Where, Why, How and for How Much.

(Figure 1 here)

Let us review what will have occurred by the end of this process: a group of top-ranking decision-makers representing all relevant agencies dealing with drugs, alcohol, and impaired driving will have (1) met; (2) received intensive training on the scope and nature of youthful substance abuse; (3) hammered out agreement on first three and finally one important substance abuse problem requiring immediate attention; (4) received additional training focusing on the problem that they identified, with the training customized for their needs; and (5) worked through a planning process culminating in the design of a coordinated response to the problem.

Further iterations of the systemwide strategy can begin with Step 3. Ultimately, the strategy will grow, problem by problem, into an approach which is comprehensive as well as coordinated. Care must be taken, however, that responses to subsequently-identified problems never hinder or compromise activities aimed at the problems identified in an earlier round. Activities which conflict or contradict one another may well erase hard-won gains.

An Application: Drug Abuse in Public Housing

Public housing projects teem with youth at high risk for involvement with drugs and crime. Virtually all the risk factors are present: low self-esteem, alienation from social institutions, lack of appropriate role models, poor school performance, low family attachment, and so forth. Often, housing projects themselves are large drug markets, and attract well-heeled dealers who in turn recruit juveniles to serve as runners. They are places where drug use is rampant, and respect for law enforcement and other public institutions is at its lowest.

If drug abuse in public housing were singled out as the problem requiring the most immediate attention, after a meeting of top public-agency decision-makers such as that described above, the systemwide strategy would come into play with a thorough analysis of the problem utilizing the Systemwide Response Planning Process.

Not all of the agencies which participate in the systemwide strategy will be of equal importance and significance for every problem. Depending upon the nature of the problem, the role of some agencies will expand while that of others will contract. At the outset of the planning process, the group would include, minimally, representatives of law enforcement, juvenile justice, public housing, schools, public health and welfare; as the process continues, other agencies may be identified and brought onto the team.

The use of qualified consultants as trainers and facilitators always is desirable but may not always be possible. Without professional assistance, full implementation of the IDENTIFY model may require several weeks and several meetings as breaks are taken to conduct analyses of needs and resources.

Eventually, the parameters of the problem will be established and an approach will be proposed.

Since this is a hypothetical example, we may assume any level of resources and an approach with as broad or as narrow a scope as we wish. For purposes of explicating the application of a systemwide strategy, we will assume that the planners settle upon a prevention-intervention approach, and that the resources for carrying out the approach are adequate. In accordance with the first row of the Service Continuum/5W and 2H Planning Matrix, the group must consider Who, in the area of prevention, does What, When, Where, Why and How (How Much is a budgetary issue).

WHO, or what agencies would be, or should be, active in a program intended to keep young people in a housing project from illegally using alcohol and other drugs? The agencies would include the public housing authority, schools, welfare department, public health, public and private social services agencies, and possibly recreation.

WHAT should these agencies do? Public housing may well take the lead in this program and offer staff to help coordinate the activities of other agencies. In addition, it may attempt to enhance self-esteem and community pride through a beautification projects and/or public information campaigns. Schools which serve the housing project could initiate special programs for the project's youth designed to develop social skills, improve classroom performance and stimulate interest in school-based activities. Public health and social service agencies could focus on the home environment and provide parents with training in family management and information on how to access needed services for themselves and their children.

WHEN should these activities be undertaken? Since a major part of the program focuses on the school, the activities should be scheduled to coincide with the beginning of the school year.

WHERE should these activities take place? This question actually is answered as part of the What: the program would involcve multiple reinforcing activities located both in the school and at the home.

WHY should this be done? The purpose of all the activities undertaken as part of the prevention component of the program is to reduce the likelihood of youth to use drugs and alcohol by changing those individual characteristics that are associated with use, and strengthening the characteristics associated with abstinence or nonuse.

HOW are these agencies to carry out the plan? The How question has two components, one having to do with the technical skills and know-how to successfully operate the individual projects making up the program, and the other component having to do organization and resource development. Part of the planning

process would be directed at ensuring that both the resources and the technical skills are in place.

For development of the intervention plan, the same set of questions would be explored, in the same order, for the second row of the planning matrix. Although new actors enter the picture in the intervention stage, and others drop out, the need for vertical coordination and cooperation in a sharply-focused program becomes obvious, especially among agencies which are central to the process.

Conclusion

A systemwide strategy does not emerge, full-blown, after one meeting or several. The strategy is built, block by block, as agencies come together in mutual self-interest to address the problems of their community. With willingness to share information and learn together, leaders of those agencies see the commonality of their concerns and come to appreciate the power of coordinated action on problems for which they each share a portion of the responsibility.

First one problem is addressed, and then another. Success builds upon success, and the successes bind together and reinforce the "culture of cooperation" which facilitates coordination. Gradually, and much in the way that the complex pattern of an oriental carpet grows from successive repetitions of tiny, identical designs, a comprehensive program emerges from the targeted responses to single, well-defined problems.

OVERVIEW OF PREVENTION, INTERVENTION, AND TREATMENT

Chapter 4

CHAPTER IV: OVERVIEW OF PREVENTION, INTERVENTION AND TREATMENT

A CONTINUUM OF SERVICES

You have been introduced to the extent of the substance abuse and impaired driving problems. You have also reviewed the best current thinking on the possible causes of these problems, and the possible factors that might place some young people at more risk than others. In this chapter, we take an initial look at the kinds of programmatic responses available to communities. This range of programs, strategies, policies and activities fall primarily within the domain of **"demand reduction."** We speak relatively little about interdiction of the supply of illicit chemicals or of the arrest and prosecution of offenders. The chapters that follow fill out this particular overview with specific details about programs and strategies. Here, it is our job together to place a framework around prevention, intervention and treatment strategies used to control drug and alcohol abuse including the problem of impaired, "drunk" or "drugged" driving.

We call this framework a "Continuum." This word connotes a single line of related responses to the problem. It implies that the different kinds of substance abuse cannot be isolated. It also implies that effective responses to the problem cannot be isolated, that there is no "magic bullet." The notion of a " continuum" of responses to the problem respects the unique contribution of every program at every stage and by every actor. However, it also honors the synergy that happens when complementary approaches are woven into an overall tapestry of problem-solving.

I. THE CONTINUUM OF THE PROBLEM

Concerned citizens often ask: "Where do we start? What are the priorities? What is our responsibility for solving the problem?" Early in the process of community action, the basic questions may seem more philosophical than practical. But the way we think about them strongly influences what we do in the community.

A very basic issue concerns the definition of drug and alcohol abuse. Many ask, "After all, what is the practical difference between substance use and substance abuse? or between minimally impaired driving and seriously impaired driving?" Is it drug abuse when a 17 year old has his first marijuana cigarette? Is it alcohol abuse when a 13 year old young woman has some wine at the family dinner table? Is it only really "abuse" when "hard drugs" like cocaine and heroin are used, or when bodies or behavior are deteriorating observably ? Is chemical experimentation or slightly impaired driving by the young abusive merely because it is illegal, even if the same behavior might not be illegal for adults?

There are no right or wrong answers to these questions. But many communities have found themselves in conflict and paralyzed because they cannot agree on the answers. Too often, community leaders are polarized in adopting "hard line" vs. "soft line" positions. That polarization could be unnecessary. Let us offer a perspective that seems to have been helpful in sidestepping unnecessary argument or confusion.

Suppose the community takes the following position:

(1) Any non-medical use by children of psychoactive drugs, including alcohol, by definition, is substance abuse, harming the body or mind more than helping it.

(2) Driving or riding in a car when the driver has recently used any amount of drugs or alcohol is impaired driving and imparts some risk to the driver, passengers, other drivers, their passengers, and pedestrians.

(3) The degree of substance abuse/impaired driving varies on a continuum from very low risk to very high risk. The degree of risk, whether to physical health, mental health, family relations or to others, varies depending on the chemical use, the frequency and amount of use, the nature of the individual and the nature of the environment.

Chart 1 presents a visual display of the progression of substance, from extremely slight to extremely high. This model, a continuum of substance abuse, allows us to be consistent in our messages to youth. We condone no substance abuse. We try to minimize any level of harm to kids. Yet we recognize individual differences in severity and threat to the community, enabling us

to assign different priorities to the array of potential community strategies.

It is important both to be consistent in our messages and to be flexible in our approaches. We know that the degree or type of substance abuse will vary in different demographic settings, even though such problems exist in some form in every American locality. By recognizing that all youth substance abuse, minor or severe, qualifies for our concern but needs to be prioritized, communities may design prevention, intervention, treatment and aftercare programs specifically targeted to community needs.

II. A CONTINUUM OF INTERVENTIONS

In this chapter, we discuss "**Prevention**," " Early Intervention" and "**Treatment/Aftercare**" as they apply to drug, alcohol and impaired driving problems.

But what do those terms mean? Obviously, they represent ways of impacting the problems of substance abuse. In one sense, anything we try to do is an "intervention." Anything systematic a community might try (policies, activities, organized strategies) could be called a "program."

Do we best describe our program attempts in terms of the type of program or in terms of the stage of the substance abuse problem?

We think it is easier first to categorize attempted solutions according the **stage** to which substance abuse has progressed. We can make a parallel here with the chart above. Programs can be designed to target individuals and groups at different stages of possible risks for substance abuse/impaired driving. In this chapter, we are focusing on young people. However, the general principles are not so different for adults.

We might refer to **Chart 2** as **Stages of Risk.** We call a series of programs that respond to the entire range of risk stages a **"continuum of services."** This continuum describes services most appropriate to kids who have never tried illicit substances, kids who are just experimenting, kids who are social users, kids who are compulsive users, kids who are truly dependent, and even kids who have been dependent but are now trying to stay out of trouble.

It is much trickier to describe services in terms of the type of program operation involved. For example, "education" as a strategy might target non-users as well as heavy users. "Peer programs" can equally benefit experimenters and addicts. "Legal remedies" may have impact on those who rarely ride with

intoxicated drivers as well as to those who drive drunk frequently.

In most communities, depending on the age groups, there will be different proportions of youth in each risk stage of the continuum of abuse. Programs must be appropriate for each of them.

Now, let's further define the major arenas of effort, illustrated in Chart 3.

Prevention programming is aimed primarily at youth who have never used drugs or have never been in high risk impaired driving situations. In the public health model (which talks about primary, secondary and tertiary prevention), this stage of intervention is called "primary prevention." Prevention is aimed also at the early experimenter.

The borderline of those targeted by prevention but approaching the domain of "early intervention" are those occasional users who have gone beyond experimentation but who are not yet in discernible trouble.

Early Intervention (sometimes merely called "intervention") usually refers to program strategies that target persons whose misuse of substances is accompanied by some related identifiable problem. For example, these young people may have come into contact with the juvenile justice system, using or selling drugs. They may be identified as intoxicated drivers. They may be having such severe difficulties in school that teachers raise concern to parents. Their substance abuse may be producing turmoil in the family, ranging from symptoms like hostility to temper tantrums to runaway threats or suicide threats. Still, these young people are usually not classically "addicted" to the substances. They are still reasonably functional and could stop using drugs or alcohol on their own if they were reasonably motivated to do so. However, they most often benefit from some kind of screening and referral for their emotional, family, school and substance abuse problems.

Treatment usually targets kids on or beyond the verge of true addiction or dependency, e.g. the teen-age alcoholic, the crack addict, the youth functionally dependent on marijuana, or the young driver who cares nothing about being intoxicated. Often, these individuals cannot change their high risk behavior unless they stop their substance abuse, and stopping such use is very difficult. At the treatment stage, we do not usually expect the young person to be able to change his or her lifestyle without significant help from others, sometimes in a very powerfully structured therapeutic situation.

Aftercare is really a part of treatment, specifically the final phase. "Rehabilitation" is another term often used to describe services when clients have completed certain stages of

treatment and are relatively substance-free. Still, program clients must be reinforced not to return to destructive patterns ("relapse prevention") and to re-integrate into society. Certain kids have so profoundly disturbed their growth and educational development that much work needs to be done simply in social skills training and re-education. Some have referred to this process not so much as "rehabilitation," but as "habilitation," since the kids never had basic skills and abilities in the first place.

Before investigating prevention, early intervention and treatment/aftercare more intensely, we must reinforce a theme appearing throughout this volume. No community plan can truly succeed unless all elements of service are provided. For example, to eliminate all traffic crashes caused by impaired driving, communities must encourage already responsible drivers to remain substance free when driving. Communities must also work effectively with those first found to be engaging in high risk drinking/drugging/driving behavior so that they never do it again. Finally, programs must be in place to work with those persons so chemically dependent that they care little about arrest or doing harm to others.

III. PREVENTION SERVICES

Prevention approaches include a wide variety of programming. Some prevention approaches are beyond the community's reach; we will only briefly mention those. Other approaches seek to reduce the related risk factors producing vulnerability to later chemical dependency; we'll only touch on these lightly as well. In this chapter, we wish to give special emphasis to types of prevention approaches most easily stimulated by community action.

A. National Forces in Prevention: Economic, Cultural and Public Awareness.

There are certain forces and trends operating across America that may be make the community's prevention job harder or easier. No community can be totally insulated from national events. For example, if the national economy makes it difficult for high school graduates or drop-outs to get work, the general attractiveness of drug dealing goes up. If our culture continues to promote "pill-popping" as the preferred method of dealing with stress, if national advertising makes alcohol, cigarettes and pharmaceutical products look appealing to the young, and if the federal government fails to develop a coherent prevention strategy, the local prevention effort must be even more aggressive.

On the other hand, to the extent that the "war" on substance

abuse and impaired driving is kept at the front of the national agenda encouraging national legislation, to the extent that the media present accurate portrayals of the problem, and to the extent that national public awareness campaigns are credible and on target, the job of local prevention may be easier.

B. Law, Public Policy and Environmental Approaches

We know two seemingly contradictory facts: (1) Legislation and public policy alone have drastic limitations in their ability to prevent substance abuse, and (2) Thoughtful legislation and policy can be a great aid to an overall prevention strategy.

Later in this volume, we'll examine more closely some of the options for legal, enforcement, prosecutorial and administrative sanctions. For now, let's only briefly mention some approaches that can be initiated by localities.

The legislative approach to controlling harmful substances revolves around **reducing supply, reducing availability and/ or discouraging illicit consumption.** On a simplistic level, if the substance cannot be obtained, it cannot be used.

The most complex legislative approaches to prevention focus on alcoholic beverages and on impaired driving because alcohol is a licit substance subject to regulation as is the privilege to drive.

Zoning and Availability Constraints. Communities can act independently to regulate where alcohol is available and to whom. Many localities have acted to restrict the sales of alcohol in areas near pockets of crime, poverty, or congregation of youth. Some communities have moved to ban the sales of alcoholic beverages at filling stations and/or athletic events, trying to prevent the combination of alcohol and driving. Other localities have put teeth into ordinances punishing retailers from serving underage buyers.

Legal Deterrents. Although we need to recognize the limits of legal approaches, they are part of the prevention picture. For example, stiffer penalties against impaired driving, such as the administrative revocation of driving licenses, may have meaningful deterrent effects on adolescents. Other laws, such as the raising of the minimum age to acquire alcoholic beverages, or raising excise taxes on alcohol, may also have measurable impact.

Server Intervention. A variation on environmental prevention for alcohol abuse involves increased responsibility for the servers of alcoholic beverages. There is now formal training that can assist servers (e.g."bartenders") to better identify underage users, to discourage customers from over-drinking, and to prevent

intoxicated customers from driving. Although it seems common sense to most readers, parents are a part of this intervention. Some parents have hosted "cash-bar" events where youth attend, or chaperon "keg parties." Obviously,communities will wish to discourage such practices and their implications on for safety.

Other prevention approaches in this policy and environmental category apply also to illicit drugs:

School Policies. There has been considerable attention recently on drug and alcohol policies in the school. Clearly communicated and intelligently constructed school policies appear helpful by providing a public statement of norms and expectations, heightening awareness of parents, teachers and school staff, and perhaps limiting the availability of drugs and alcohol on school campuses. Schools are becoming more sensitive to the potential role of cigarette smoking in the substance abuse syndrome (very highly correlated with illegal drug use) and have banned tobacco from campus.

Normative Deterrents. Effective prevention involves the process of making abstinence from illicit drugs a desirable behavior. It also involves making drugs seem undesirable. Public policy, expressed as law, has a part in the latter. Strict criminal laws against the importation and dealing of drugs may not significantly reduce the general supply or availability of all illegal drugs. In the best case for demand reduction, we can hope for significant reductions in particular drugs and a general increase in price,and subsequent personal and economic cost to the buyer. However, such laws also provide powerful reinforcement for the social norm against drug use. The societal message--"It's not all right."--is especially critical for the young.

C. Prevention Services Targeted at Individuals

The Importance of Motivation. Further in this training package, we'll be looking much more closely at types of prevention services aimed at individuals having various levels of risk for drug abuse. There is one basic notion supporting all these approaches or strategies and the programs upon which the services are based. In one way or another, these types of prevention programs attempt to reduce the personal motivation or "desire" for mind-altering or mood-altering substances. Emphasizing the reduction of "demand" is good prevention science. It is also common sense. Indeed, appearing behind every prevention program, no matter how or where it is delivered, is some theory involving the reduction of personal demand for harmful substances.

The concern about "motivation," "desire" and "demand" is related to another term that's becoming more popular in the

field. Prevention and treatment researchers are becoming especially interested in identifying personal **"risk factors"** for the most serious cases of substance abuse. In searching for the factors that best predict serious substance abuse, specialists have begun to identify patterns that seem somehow related. As you have read in previous chapters, much of this research has focused on young people, particularly those in higher risk populations.

However, as we mention immediately below, once drug use has been initiated, fewer and fewer are "relatively safe" from substance abuse, even if their personal histories seem relatively devoid of risk factors. Given the immense potential of substances like crack cocaine to overpower otherwise healthy life styles, we must underscore the importance of **delaying** experimentation with drugs. There are simply too many cases where otherwise healthy and happy lives have been crippled or lost from an inability to assess the power of the chemicals to change perception, abilities and behavior.

Now, let us run through the major categories of individually-oriented prevention services, focusing on this issue of motivation:

Prevention Services Aimed at Inherent and Biological Desire. We start a difficult problem for prevention in general and one which may not be relevant directly to community action. Yet the issues are important background in many community discussions. Two examples are particularly controversial:

(1) Certain individuals seem hereditarily or genetically more prone to alcoholism than others. Substantial evidence exists that alcoholism runs in families, that the sensitivity to alcohol as a chemical is partially affected by heredity. Thus, certain genetic characteristics may make some people more prone to alcohol addiction than others. Some researchers suggest that the same may be true for other drugs, but that evidence is currently much weaker.

Suppose scientists do find "biological markers" in people that make them higher risk. What then? At this point, prevention strategies might simply involve a great effort to let these people know of their vulnerability and to help them act on it. At the same time,"labeling" children as high risk for alcohol or drug problems may create its own problems.

It is possible that biological research will come up with some kinds of biochemical aids that will suppress the tendency toward "inborn" alcohol and drug addiction. Whether and how such agents can be used as preventative, how to assess the side effects, and how to justify their administration to non-users would pose difficult ethical and scientific issues in the future.

(2) Another example of biochemically-produced desire involves the fact that some chemicals are so "reinforcing," so temporarily pleasurable, that chemical dependency may be very likely even if there are no particular high risk factors in the user's personal history.

Indeed, almost everyone will be addicted to alcohol if they drink sufficient quantities over a sufficient period of time (and are not allergic to it). Everyone will become physiologically addicted to opiates if taken in sufficient quantities over a period of time. Anyone is at high risk for severe psychological dependency if cocaine is used in sufficient quantities and frequency. These chemicals are powerful enough to create dependency irrespective of the other characteristics of a young person's life. No young person is really "safe" from substance abuse once experimentation occurs.

Both these examples are long term issues for prevention. We can always hope for a "magic biochemical antidote" for those who are genetically more vulnerable. Others look toward a wide range of "biochemical blockers," which would knock out the pleasurable qualities of various drug effects. However, there is no reasonable chance that such chemicals will be available within the next decade. More practically, there is also no assurance that people would wish to use such chemicals, nor be persuaded to take them <u>before</u> problem substance abuse was identified.

In reality, only a minuscule amount of substance abuse is actually "caused" by biological factors. But the potency of chemicals to change attitudes and behavior should never be underestimated. We may all know relatives, friends or acquaintances who have managed successful lives during the beginning of their alcoholism or "soft drug use." They began by using these substances recreationally and pleasurably. Indeed, they felt that the alcohol/drug experience enhanced their already successful lives at some level. Then the addictive pattern took its toll.

<u>Prevention Services Aimed at Motivation to Alter Feeling.</u> Some theorize that problems in feeling or "affect" can create the desire for drug use or "self-medication." Such negative feeling states include depression, anxiety, boredom, loneliness and the like. These feelings may be brought on by underlying personality disorders or psychological problems in development.

Prevention programs based on such "affective regulation" will stress identifying at-risk individuals at a very early stage and providing treatment or counseling. However, these programs also may create difficulties in "labeling" kids and dilemmas in any "screening" process for such problems.

<u>Prevention Services Aimed at Decreasing Motivation through Knowledge of Drug Effects.</u> The strategy of providing information

and education about the negative effects of alcohol and other drugs has been long-standing. Research indicates that such information may be helpful in producing attitude and behavior change, but is rarely powerful enough alone to overcome other pressures to experiment. Some adolescents are notoriously resistant to "scare" tactics for any health problem. Substance Abuse information is usually delivered through school curricula, brochures, television and radio spots and other related materials.

Prevention Services Aimed at Decreasing Demand through Increasing Life Skills. A wide range of program activities have been developed to help enhance various "life skills" and self-concept. It has been assumed that deficits in these areas increase the appeal of drugs and alcohol. These programs may emphasize increasing the self-esteem of kids, teaching them communication skills and introducing them to better ways of making decisions.

Prevention Services Designed to Encourage "Alternatives" to Drugs. Such programs predict that satisfying non-drug experiences, activities or lifestyles act as an "immunizing" agent against the appeal of "getting high." Prevention programs that feature alternatives might offer a wide range of activities from employment training, recreational opportunities, spiritual experience or charitable and voluntary activities, any of which would compete with the attraction of the chemical high and, hopefully, be inconsistent with it.

Prevention Services Aimed at the Peer Group. There is overwhelming evidence that young persons' friends, siblings or other peers are the major source of available drugs and a primary source of the motivation to experiment and use. Recently, a range of prevention programs were developed to respond directly to this threat.

For example, there are programs that attempt to counter the notion that drugs or drinking are "in," are a way to "fit in with the crowd." Such programs attempt to let youth know that not everyone is using; substance abuse is not normative and is not as common among their peers as they might have thought. Some programs encourage elementary age youngsters to pledge that they will not use drugs and formally identify themselves as members of a "club" or other unit where illegal substances are not used.

Recently popular are prevention programs that attempt to direct peer influence. For example, some programs teach "peer resistance" strategies--how to "say no" to offers of drugs. They will give kids practice in socially acceptable ways of resisting peer pressure in role-playing situations.

There are a variety of peer leadership prevention programs. Here young people, often as students, band together to educate younger kids or their own peers. Popular programs such as "SADD"

(Students Against Driving Drunk) target particular high risk impaired driving behavior and attempt to utilize peer pressure to prevent it.

Prevention Services Focused on the Family. Given evidence that poor family experiences can be a significant risk factor for chemical dependency, many prevention services are oriented toward the family. Certainly, parent education about the problem is one approach. Another type of program attempts to stop the "negative modeling" of parents. (Parents are urged not to be bad examples for the young in terms of their own use of licit and illicit chemicals.)

Other program types focus on the functioning of the family unit itself. They often feature training in parenting skills. Topics that are often brought up include: parental permissiveness and inconsistency in discipline, problems in the use of harsh physical punishment, and poor family communication patterns.

Other aspects of parenting training include techniques helpful to socializing children in basic values, such as self-control, self-discipline and self-motivation. Families are shown ways of structuring the home environment in order to strengthen kids abilities to stay away from anti-social behavior.

Another aspect of family-oriented prevention programming involves increasing the "social control" or power of parents to monitor high-risk behavior of kids. An example is a group of neighborhood parents banding together to institute and enforce a consistent set of rules concerning curfews, parties and mutual monitoring of neighborhood/school behavior and peer relationships. Often, groups of concerned parents also attempt to impact school policy and other aspects of community awareness.

Prevention Services Designed to Increase Social Bonding. Most often used in schools, social bonding programs attempt to help kids "bond" to conventional adults who stand against deviant behavior. Such programs hope to increase kids attachments to parents, teachers, coaches, older students, law enforcement officers, etc. As applied in an improved "school climate," teachers are often encouraged to reinforce positive behavior, institute cooperative learning approaches and let students know clearly what is expected of them.

Perhaps related to this approach are program attempts to improve the "social climate" of schools and other centers of youth activity. This may involve attempts to get students to be prouder of their particular school, respect school property,and identify with school spirit (sports teams,etc). Simultaneously, the school administration attempts to make changes that increase students' involvement with school affairs and their investment in education.

Prevention Approaches Designed to Increase Cultural and

Religious Bonding. In many parts of the country, so-called "minority groups" are becoming the majority of the youth population. One preventive approach appearing in minority communities or neighborhoods feature the celebration of culture and ethnicity as weapons against drug use. Such programs attempt to get kids more linked with their "roots," cultural traditions, family values and their positive uniqueness. Indeed, many of the values and traditions of ethnic culture are brought out as directly contradictory to the illicit use of drugs (e.g. in Hispanic, American Indian, Asian, and African heritages).

Religious institutions have been active in providing substance abuse services, though prevention is just emerging as a priority. There is some evidence that involvement in religion and strength of spiritual beliefs is a potent antidote to drug experimentation. Some might consider this a subset of the idea of "alternatives to drugs," but it may be worth mentioning specifically because of the potentially vast resources of religious institutions pertinent to in prevention services.

IV. EARLY INTERVENTION SERVICES

We've already said that the line between "prevention" and "early intervention" can be very thin. We should also emphasize that many of the same program activities or foci (e.g. improving family communication) can be important at all stages (prevention, early intervention, treatment and aftercare). However, the early intervention stage is uniquely concerned with the identification of possible trouble, and dealing with it quickly before full chemical dependency sets in.

A. Screening and Referral Services

Intervention Through Detection and Screening. As with most public health crises and social health problems, the earlier intervention, the earlier and easier "cure." This principle applies also to individuals who may be starting the " social" use of drugs and alcohol or who find themselves vulnerable to impaired driving situations. Given the fact that youth are usually unable to assess the danger of their own substance use and almost never volunteer such information to adults in authority, there is natural concern over detecting problematic use as early as possible.

Some detection strategies are fairly intrusive. For example, a few especially vulnerable schools have taken to formal monitoring of parking lots and bathrooms, physical searches of lockers and clothing, use of specially trained drug-sniffing dogs,and placement of young undercover agents. Of course, urine

testing is one of those more intrusive strategies. It has not been used very much in prevention, but is being used more frequently when youth get involved in the criminal justice system for non-drug offenses.

More indirect detection strategies, often called "screening" strategies, involve the training of adults in spotting possible young substance abusers. For example, interview schedules and questionnaires have been developed for pediatricians and other primary health care workers, who see a large percentage of kids as they grow up. Formal screening training may also be given to school staff and to parents. In the best case, parents, educators and other care-givers will be sensitive to changes in behavior, school performance, mood, peer choices and other signs that may signal substance abuse. Obviously, there is no complete list of signs and symptoms that guarantee substance experimentation, so we must be careful to label kids too quickly. On the other hand, to ignore such signs is to court trouble.

We don't wish to minimize the potential legal and ethical difficulties that such detection and screening programs may produce. If not handled delicately, they can do more harm than good. But the need for early detection is driving more and more experiments in this direction.

Referral and Assessment Services. One critical aspect of intervention involves an initial broker of services, a function sometimes called "I & R", or Information and Referral.

One useful form of referral, especially self-referral, is the so called "hotline." . These phone numbers, also referred to as "crisis lines," are sometimes national and sometimes local, and do not require the caller's name. Depending on their purpose and the training of the phone personnel, hotlines can offer referral to helping agencies, advice, on the spot counseling, specific drug information and the like. Some hotlines specialize in a certain drug (such as 1-800-COCAINE). Others may deal with a wide variety of personal difficulties, from suicide to child abuse. Where adolescents are involved, many of the major social and health problems are often drug or alcohol related, so even the broadest hotline services have relevance to substance abuse.

In a continuum of community services, there should be a hotline or crisis line that offers anonymous information and referral to callers, whether they be kids experiencing overdoses, curious adolescents, concerned parents, or worried friends. A good information and referral service has on hand the names and phone numbers of professionals, paraprofessionals and agencies that can help with specified problems. The referral sources should be well-researched and updated. A referral center may also have a limited library of brochures and booklets to be sent out if appropriate.

Face to face intervention referral is equally critical. In recognizing potential drug and alcohol problems, the user is usually the last to become concerned about the problem. More likely, it is a friend, parent, teacher, health professional, juvenile justice officer, employer, or school counselor that suspects a budding substance abuse problem. Very few of the likely referral agents are trained in substance abuse counseling. It thus critical for them to know the general options for substance abuse services.

Special attention for referral options must be given to those in the criminal justice system and those in the public and private schools. These are the two most likely formal systems to notice disruptive behavior or other symptoms that may be tied to substance abuse. A third priority, more difficult to reach, are parents. It may be best to try to acquaint parents with one hotline number than have them learn all the options in advance.

Referral is both an art and a science. "Assessment" is a critical part of all referral. Questions must be asked and answered: "What is really the problem? What services might be best for this particular case? What are reasonable expectations? How should the significant people in his/her life be informed about this?" The handling, by professionals or paraprofessionals, of the assessment, referral and follow-up process is often called "case management." Good case management requires helpers and helping systems not only to do proper assessment, but also to track a particular kid (or case) over time and over the several agencies that might be involved.

B. Peer Referral and Student Assistance Programming

Needless to say, it is often very difficult for kids to report their own drug/alcohol problems to parents or school authorities. In the first place, the early symptoms are simply not seen as a "problem." In the second place, fear of reprisal is a strong disincentive.

Discussion of possible substance abuse problems within peer groups is easier. A hopeful trend is the rise of peer participation in the early intervention process, which takes many forms:

Rap Groups: These are formal ongoing discussion groups usually led by trained peers or by sympathetic adults, covering a wide range of probable pre-teen and teen problems. They may be school-based or community-based.

Rap Rooms: Some schools provide a special room for students to go for confidential sharing of problems or difficulties. Again, they are supervised by a competent adult but often at least co-led by students.

Student Assistance Programs: Schools have borrowed from industry ("Employee Assistance Programs" or "EAPs") a model of confidential assistance to students, often known as "SAPs." An SAP may provide a broad range of services to students, most often outside the formal school authority structure. The SAP offers counseling, referral, intervention services and other forms of guidance to students in trouble, usually without the specter of disciplinary action. These programs work best when students refer themselves or friends who generate concern.

Peer Counseling: These programs involve trained youth who are qualified to do introductory counseling and referral for other youth, either peers or younger students. Confidentiality is maintained. Good peer counseling programs put a great deal of emphasis upon proper recruiting of counselors, excellent training and close supervision.

C. Other Intervention Programs

Given the central facets of early identification, referral, counseling and specific intervention, there are other forms of intervention programs.

Drop-In Centers: In many communities, there are no places for youth to congregate, either for recreation or for assistance. A "Drop-In Center" may provide a wide array of services or a more narrow range. Usually, the Center is placed in a neutral, youth-oriented setting, often with recreational components and with hours oriented to the ordinary patterns of youth free time. With a proper substance abuse component, they may offer counseling, group discussions, advocacy, formal referral services and expert outside consultation from medical and social health personnel. Often a comprehensive drop-in center will provide help with associated risk factors to substance abuse, including perhaps help with domestic violence, issues of teen sexuality, economic difficulty, physical health problems, runaways, school problems and the like. The substance abuse component may be fit into already existing community centers, e.g. Boys and Girls Clubs, YMCAs or others.

Intervention Services of Treatment Programs: Below, we describe the major kinds of treatment programs available to youth. Some of them do not offer formal intervention services (e.g. residential hospitals in rural settings), but others do. Treatment programs may often offer diagnostic and assessment services as well as out-patient services that may be appropriate for the social user.

Some self-help groups may be able to provide structured "interventions" for individuals who may be denying a substance abuse problem. Such an "intervention" constitutes a surprise confrontation of the individual by his/her close ones and a

trained "intervenor." The hoped for result is a commitment to some kind of treatment by the confronted individual. For our purposes, this type of intervention can be directed at the troubled young person, but also at the adult who is disrupting the family system.

System-Mandated Intervention: Most of the early intervention services we've mentioned above are primarily voluntary. Some early intervention is mandatory. We talked of the referral capabilities of the juvenile justice system. It is also possible that the system or a juvenile institution can offer its own therapeutic programs, often a condition of probation.

A frequent example of the mandated programs are a wide variety of classes/seminars/groups that must be attended by those convicted of drunken or impaired driving. Although many of these classes are merely educational, some can target incipient alcoholism and/or guide the offender into more structured treatment. Judges can exercise individual discretion in teen drinking/driving offenses where structured classes don't exist or seem not to offer a sufficiently intense experience. For example, judges might mandate teen offenders to attend Alcoholics Anonymous meetings several times a week for a certain period of time.

V. TREATMENT and AFTERCARE SERVICES

A Note on the "Disease" Concept of the Addictions. Many treatment approaches, especially those involved with alcoholism, consider chemical dependency a true "disease." Indeed, many of the leading alcoholism treatment centers consider alcoholism a chronic and progressive disease, a disease which will ultimately become fatal unless "recovery" is initiated and full and total "sobriety" is maintained.

There are advantages and disadvantages in considering chemical dependency a "disease." Currently, most clinical workers in the field feel that the disease concept is a great help. First, it is consistent with the "Twelve-step" programs (see below) and helps in relapse prevention. According to this view, one is an "alcoholic" or "drug addict" forever, and is always "recovering." Whether or not this view can be validated scientifically, any return to addicting chemicals is always dangerous and we would be hard pressed to encourage social use after a severe dependency.

Another advantage to this view involves ridding the chemically dependent person of the label of "sinner" or of the charge of moral weakness. The disease model allows a medical approach to be seen as valid. Perhaps more important practically,

it allows health insurance to cover treatment costs.

The disease model also encourages research into physiological and bio-chemical changes made by addicting chemicals, as well as the possible influence of genetic vulnerability.

One disadvantage of the model is the assumption of a certain kind of fatalism in developing chemical dependency. If one is "vulnerable to the disease," he or she should never drink or use drugs. Alternatively, this might imply that the non-vulnerable can experiment with psychoactive chemicals all they want without danger of dependency. This implication is dead wrong. Everyone <u>will</u> become a true alcoholic or drug addict if they consume enough of the substance over a long enough time (longer for alcohol, very short for crack cocaine).

Some critical of the disease model suggest that it is almost infinitely expandable (the "disease" of nicotinism, the"disease" of overeating, or the "disease" of sexual promiscuity), and thus obscures personal responsibility for just about any excess.

Probably the least desirable aspect of the model as it applies to youth has been its classic ignoring of the importance of a public health perspective in general and prevention in particular. A huge amount of the destruction caused by drugs and alcohol occurs <u>before</u> true addiction sets in. The disease model helps us very little in those stages of intervention, and in the case of alcohol abuse, has probably retarded the cause of prevention.

Do we really have to take a stand on whether alcoholism and drug dependency is a true "disease" such as influenza or is better described as physiological and psychological addiction? If communities understand the basic advantages and disadvantages of the model, it matters little.

A. Types of Treatment

Common sense says that the intensity of any program must match the intensity of the problem. In the treatment area, we have the most forceful elements of service, in terms of the compliance demanded from the patient and the time and effort required from service providers.

<u>Detoxification.</u> We can now safely say that effective treatment is almost impossible if the dependent youth is still captured by physiological addiction. Chronic alcoholics or crack or heroin addicts simply do not respond to any usual form of therapy while they are still using. Perhaps they can be partially managed, but the prognosis is poor.

The cessation of substance use can be done in several ways, all of which share the goal of returning the physiological system to some degree of normalcy. This process is most often called "detoxification." It can of course be voluntary. A person (e.g. cigarette smokers) can just decide to go "cold turkey," and hold to that resolve by force of personal will. Even when an individual is motivated to detoxify personally, it is very difficult to do. Most of the youth requiring treatment are not greatly motivated to stop their habits, so most detoxification is done in more formal settings.

When chemical dependency is severe, and withdrawal promises possible severe bodily reactions, medical management is very important. Much detoxification thus occurs in hospital settings, most often with the patient residing in the facility. Certainly, "detox" can also be done in an outpatient setting. In practice, some detox is done in juvenile detention facilities, simply as a result of the unavailability of drugs.

In-Patient Treatment Programs. Particularly with adolescents, aside from incarceration, the most powerful short-term intervention is the hospital stay, usually in a chemical-dependency unit. Many of the available medically oriented residential facilities are now operated by for-profit commercial companies; some are administered by non-profit groups.

If chemical dependency is the primary problem, a one month to six week stay is perhaps the most common, hopefully with good follow-up services. If there are independent mental health or severe behavior problems, longer stays are usually indicated. In any event, such stays are very expensive, usually not less than $250 per day and up to $700 per day.

Therapeutic Communities. There is a special kind of residential program, most often associated with drug addiction, called a therapeutic community. Therapeutic Communities ("TCs") are often characterized by relatively long stays (one or two years at a minimum), extremely tight discipline and supervision, former addicts or program graduates as the primary counselors, frank, psychologically devastating group therapy, and ultimately powerful group support and program loyalty. Although sometimes controversial because some members almost never "graduate," TCs often have the best records for clients thought otherwise incurable or non-reformable. When TCs are made a condition for probation, attendance in the program improves. The major population of most TCs are not adolescents, although more and more long-term residential adolescent programs begin to have some programmatic resemblance to classic therapeutic communities.

Halfway Houses. Between in-residence programs and outpatient programs is the "halfway house" concept. Here, under supervision, detoxified chemical dependers live in a kind of therapeutic community but they are expected to go out in the world, including work schedules, family visits and recreational

visits. The halfway house, long used in mental health treatment, offers a buffer between the demands of normal life in the world and the total protectiveness and discipline of full residential programs.

Out-Patient Treatment. Residential programs are not always possible or cost-effective. Because of insurance payment restrictions, most insured hospital-based programs release clients before they are safely sober or drug-free. Out-patient treatment utilizes many of the program components of residential programs and of intervention techniques.

One unique out-patient technique is "drug-substitution therapy." Various medicinal drugs are used for the detoxification process to accomplish gradual withdrawal. Sometimes, for narcotics addicts, a steady dose of opioid substitutes are given, with he intention of decreasing or eliminating craving without the crippling physiological side effects of withdrawal. Most famous are methadone maintenance programs,even though methadone is itself physically addictive. Many experts cite the limitations of this kind of therapy. Others say that it is a valuable temporary measure, especially when opiate addicts cannot be forced into treatment by any other means.

There is ongoing research and bio-chemical trials of other drugs that might be helpful in treatment. Aside from substitutes, there are so-called "blockers," which block the psychic action of illicit drugs. Other drugs called "antagonists," such as antabuse, can create violent nausea when the client uses alcohol. Still others in development would simply decrease the biochemical demand for specific drugs like cocaine.

Other techniques of out-patient treatment will include:

--individual counseling
--family counseling
--group counseling
--peer group formation
--vocational development
--remediation of poor social skills
--religious or spiritual involvement,and
--membership in ongoing self-help groups.

Aftercare: Rehabilitation and Relapse Prevention. Where lives have been substantially disrupted by chemical dependency--jobs lost, families fractured, self-esteem crippled,education stunted--much of the final task of treatment is a rehabilitative process. Treatment counselors help their clients to mend fences, to re-enter normal life with an "overhauled" personality.

This rehabilitation process is critically important, because it often predicts the success of clients to "make it" in the

world without chemicals. In adults, "rehabilitation" is probably exactly the right word. As mentioned previously, for many adolescents, the concept is better phrased as "habilitation." These individuals never have mastered the academic environment, inter-personal relationships, vocational work habits, or disciplined social behavior. They cannot re-learn the skills; often they must learn them for the first time.

Common sense tells us that even changed personalities in unchanged environments are vulnerable to relapse. Historically, the great majority of youth relapse after their first treatment experience. Many chemically dependent youth and adults become semi-permanently "drug-free" only after several exposures to treatment programs or "modalities" of treatment. It is naive to expect any single treatment experience to "cure" a severe chemical depender. How many of our readers tried to stop smoking cigarettes, and how many times before being nicotine-free for five years or more? In those truly "addicted," with their bodies' biochemical structure altered, desire for the chemical-- for the high-- will likely exist far beyond their detoxification. If you return the individual to the social situations that encourage drinking or getting high on drugs, the urge to relapse is even more powerful.

Thus, relapse prevention is becoming a more important part of the best treatment programs. Part of relapse prevention involves structured follow-up by the program or by self-help groups. Another aspect of relapse prevention, just being perfected, are educational and motivational training series that anticipate the dynamics of relapse and help the individual prepare for those inevitable pitfalls.

"Twelve-Step" Programs: Self Help Groups. One philosophy dominates all others in the treatment of chronic alcoholism and is being used aggressively also in the treatment of drug addiction. These are the so-called "Twelve-step" approaches, including Alcoholics Anonymous, Alanon, Alateen, Narcotics Anonymous, Cocaine Anonymous, Children of Alcoholics groups, and so on. Most hospital or residential treatment facilities feature these approaches to a substantial degree.

A very brief summary of the Twelve Steps (originated by Alcoholics Anonymous) was given by AA member and New York Times reporter Nan Robertson: "We admit we are licked and cannot get well on our own. We get honest with ourselves. We talk it out with somebody else. We try to make amends to people we have harmed. We pray to whatever greater Power we think there is. We try to give of ourselves for our own sake and without stint to other alcoholics, with no thought of reward." [in The 100 Best Treatment Centers for Alcoholism and Drug Abuse, by L. Sunshine and J. Wright, Avon Books, 1988, N.Y., p. 435]

With over 1,000,000 members and 67,000 groups in the United States alone, A.A. and related groups are a powerful relapse

prevention force as well as an intervention resource. There is wide agreement that active participation in the A.A. approach is extremely helpful in relapse prevention. There is recognition that the Twelve-step philosophy has not proven as accessible to some minority populations, to those uncomfortable with a spiritual emphasis and to certain types of drug users. Traditionally, A.A. also showed a reluctance to do active outreach; until recently, many in A.A. felt that it was useless to deal with anyone until they had truly "hit bottom." Nonetheless, the A.A. and related approaches have proven invaluable for hundreds of thousands trying to stay chemical-free and has been a great resource for relatives, employers and friends impacted by the addictive process.

RESOURCES FOR PREVENTION, INTERVENTION, AND TREATMENT

Chapter 5

RESOURCES FOR PREVENTION, INTERVENTION AND TREATMENT

Today many people are interested and willing to become involved in activities which are designed to improve or solve some of the many problems associated with or caused by drug abuse. The variety and number of resources is expanding rapidly. In this chapter I will identify organizations which will help you locate programs already active in your community and sources of information which will help you start a new program where none exists.

The first local contacts to make to obtain information about what exists include: the United Way office, if your community has one, the Mayor's office, the local school superintendent, the local library, and the telephone directory. Each of these sources is readily available. Most will be able to supply some useful information.

The telephone directories around the nation have a section in the index set aside listing the local drug service programs. Most drug treatment programs are not only aware of the sources of public support for services but are also aware of the sources of public support for services but are also aware of local prevention and intervention organizations. If the title of the program does not clearly inform you of the services which are offered place a telephone call to verify this information. Most programs are eager to explain the work they do and their opinion

as to why the community benefits by their activities.

If your community supports an United Way, there is available to you an organization that routinely surveys the full range of local service programs and has the ability to tell you who is providing programs in the drug abuse field.

Elected officials, such as a Mayor or County Commissioner, often keep resource files which describe the national and state sources for community anti-drug programs. These same officials usually are advocates in garnering funds from public sources and will refer you to additional sources of help within the area as a constituent service.

With the national emphasis in 1986 on establishing drug free schools and the promotion of anti-drug curricula within the local elementary and middle schools, the superintendent and the school board have been given resources to establish relationships with community drug prevention programs. Additionally, the school counselor or nurse is likely to have considerable information about local prevention, intervention, and treatment resources for young people.

Your local public library has a resource section which often includes the Catalogue of Federal Grants Programs. It lists in detail the various federal agencies, the legislative authority, and the eligibility requirements for each program. The benefit to using this document is your ability to identify early on which agencies fund programs similar to your interests.

Finally as a local resource you should not overlook the

community service organizations. Several have designated drug abuse as an area of priority concern. These service organizations will in the right circumstances, help raise money to start a program for local citizens. Some have materials produced nationally available for your use.

If after contacting your local officials and agencies you are still not satisfied by the information you have gathered I would recommend you contact your state agency designated to direct, plan, and coordinate the drug abuse programs in your state. Each of the state drug agencies has available all the stated approved treatment programs. Most of the states have a person of the staff designated as the state prevention coordinator. Some states have staff of contract personnel trained and prepared to help you start a local program where none exists. Your state drug abuse agency is responsible for the management of several million dollars of federal funds and usually an even larger amount of your state tax revenues. As a resident of the state you have every right to expect and receive information and services from the agency. (See the lists at the end of this chapter for the address and telephone number of your state drug abuse agency.)

Before you begin to develop any specific ideas about what you do you will want to assure yourself that you are not missing some obvious opportunity. You should contact the National Clearinghouse for Alcohol and Drug Information (NCADI). NCADI is located in Rockville, MD and is the source of complete

information regarding potential sources of federal support for local programs. (See address and phone number at end of chapter). It also serves as a general information source about alcohol abuse and drug abuse. The Clearinghouse will send you single copies of articles and brochures which will help you become better informed about these subjects. When you write or call the Clearinghouse you can ask that they search their files for information on a specific subject. This is a major information resource which is often overlooked by people not familiar with the federal government.

When you receive the material from the Clearinghouse outlining the number of federal sources of community assistance available, you will probably be surprised at the number and variety of agencies actively funding anti-drug abuse efforts. To simplify your decision process I recommend that any activity you plan to address treatment issues be discussed and coordinated with your state drug agency. In the area of intervention and prevention the decision about primary contacts is not clear. There are many more opportunities to deal directly with federal program officials. Sorting through the several federal agencies with prevention activities can be confusing.

In 1986 the Congress established in law the Office of Substance Abuse Prevention. It was given a broad mandate to focus on high risk youth. In 1988 its' mandate was extended to include prevention of drug and alcohol abuse throughout the entire population. As an Office charged with such a large task

OSAP has formed cooperative relationships with many other federal agencies working in this general area. Their ability to know about federal resources and guide you to other appropriate agencies is very helpful. Additionally, OSAP is providing technical assistance to communities through contracted consultants who are available to give guidance in assessment strategies, program design and implementation. A full description of the SOAP services to the field is available from the Clearinghouse.

Once you have information that your community has some services and also some gaps in the services, the task of making a Judgement as to exactly what you want to do is very important. You must make an assessment regarding the existing resources. Are they sufficient? Are they properly coordinated? Is the greatest benefit in expanding the present programs of the needs of the basically unmet? Is your interest and are your talents best used by joining an existing program? Are you and the community best served by starting a new project?

To accurately make this judgement you should become familiar with the total services structure of the community. While this may initially slow you and seem to be wasted energy, in the final decision it is the process which gives you the confidence that your decision is correct. If as a result of this process you decide to initiate a totally new program you should understand that there are likely to be several months delay while you deal with the prerequisite organizational issues. Adding a service to

an existing agency or establishing a collaborative activity between two functioning programs is normally a quicker strategy.

It is not uncommon to find more than one agency providing services to the same population in an uncoordinated manner. It is also common to have the same services delivered by more than one agency. Advocacy to accomplish interagency cooperation and collaboration is often useful. Ad Hoc committees of all the drug abuse services agencies within the community are able to provide the forum for better and more effective delivery of services. Duplication can be minimized. Referral arrangements can abe formalized. Local resources are maximized.

In some communities there are existing agencies which do not respond to the perceived needs of the community for drug abuse services. They have often had a tradition of serving a different client population. Because it is easier for these agencies to continue in their traditional pattern it often takes an active community advocate to persuade the organization to take on new responsibilities. When mobilized, existing strong agencies can initiate and implement effective services with great speed and impact. Often working within the Board of Directors of a local agency to educate the board members to the communities need for anti-drug abuse services is an efficient technique.

Basically you are encouraged to express your concerns about your own community and expect that community supported and tax supported agencies have an obligation to respond. The final outcome may not be all you desired but little change occurs when

we expect others to change without any motivation.

SOURCES OF INFORMATION

I. NATIONAL CLEARINGHOUSE FOR ALCOHOL AND DRUG INFORMATION

This is the largest clearinghouse for drug information in the country. It has available materials produced by all the departments of the Federal government. This organization can provide you with information on all Federal community support programs intended to combat drug abuse.

P.O. Box 2345
Rockville, MD 20852
(301) 468-2600

II. NATIONAL ASSOCIATION OF STATE ALCOHOL AND DRUG ABUSE DIRECTORS (NASADAD)

This agency has information regarding treatment and prevention programs within the state. They function as the manager of Federal block grant funds. They also manage the state tax revenues which support treatment and prevention.

They can also provide a list of State Prevention Coordinators within each state who have as their prime responsibility the development and delivery of prevention services. This list provides the names, addresses, and telephone numbers of that key state contact. The address and phone number is:

NASADAD

Hall of States

444 North Capitol Street, N.W.

Suite 520

Washington, D. C. 20001

(202) 783-6868

III. STUDENTS AGAINST DRIVING DRUNK (SADD)

SADD is a national organization with some 14,000 chapters in high schools, 4,000 in junior high schools, and 400 in colleges. Specific initiatives include educational programs within schools and the community regarding the dangers of driving while intoxicated, advertising campaigns, and promoting the creation of weekend hotline services to provide safe rides. Additionally, SADD encourages age-appropriate contacts between teenagers and their parents, and between college students and their schoolmates to facilitate safe behavior in drunkenness were to occur. Students Against Driving Drunk, P.O. Box 800, Marlboro, MA 01752 (617) 481-3568.

IV. MOTHERS AGAINST DRUNK DRIVING (MADD)

MADD was established by the mothers of victims of drunk drivers. With membership open to all parents, including fathers, MADD is noted for its efforts in bringing our nation's drunk driving problem to the attention of legislators and the general public. Among the major activities of MADD is the promotion of public policy against drunk driving. The group is also noted for providing victim assistance and community education. MADD has nearly 400 chapters nationwide. MADD, 660 Airport Freeway, Suite 310, Hurst, TX 76053 (817) 268-MADD.

V. NATIONAL FEDERATION OF PARENTS FOR DRUG-FREE YOUTH (NFP)

NFP is a national umbrella organization of more than 8,000 parent groups and 500,000 members. NFP is primarily involved in public policy promotion and education. The organization's "informed parent groups" provide drug-related education for parents and other interested community members, and they sponsor drug-free youth activities. Among the more popular activities sponsored by NFP and its parent groups are "Project Graduation" and Safe Homes." Project Graduation provides drug- and alcohol-free activities for graduating high school seniors. Safe Homes encourages parents to pledge drug-free, supervised homes for youth and their friends. National Federation of Parents for Drug-Free Youth, 8730 Georgia Avenue, #200, Silver Spring, MD

20910 (301) 585-5437.

VI. TOUGHLOVE

TOUGHLOVE is a national network of local self-help programs for families of teenagers troubled drugs and behavioral problems. Toughlove is a crisis-intervention program that provides support and education for parents seeking to gain the cooperation of and control over their families. Toughlove members practice a distinct, sometimes controversial philosophy that dictates firm action in exercising parental roles. The program offers a newsletter and educational materials to parent groups. Toughlove, P. O. Box 1069, Doylestown, PA 18901 (215) 348-7090.

VII. NATIONAL PARENTS-TEACHERS ASSOCIATION (PTA)

The PTA is the nation's largest child-advocacy association. PTA has 5.8 million members in more than 25,000 schools. National PTA provides a number of programs through local schools in the areas of health, education, and safety. Among their programs in drug and alcohol abuse are the "National Drug- and Alcohol-Abuse Prevention Project" featuring a "Drug- and Alcohol-Awareness Week." "Parenting: The Underdeveloped Skill," an education program for parents featuring drug- and alcohol-abuse prevention and general parenting skills, and a number of education brochures such as "Drug Abuse and Your Teen: What Parents Can Do." National PTA, 700 North Rush Street, Chicago, IL 60611 (312) 787-0977.

VIII. FAMILIES ANONYMOUS

Families Anonymous is a national network of more than 300 local self-help groups patterned after Alcoholics Anonymous. FA groups are open to anyone, including parents, relatives, and friends concerned about drug abuse or related behavioral problems. FA maintains a hotline, helps establish community meetings, and makes referrals to local groups. Families Anonymous, P.O. Box 528, Van Nuys, CA 91408 (818) 989-7841.

IX. NARCOTICS ANONYMOUS (NA)

Narcotics Anonymous is a national network of more than 2,000 regional groups. They are closely patterned after Alcoholics Anonymous. NA groups are conducted be recovered drug addicts, who follow the AA program to aid in rehabilitation. NA publishes a variety of helpful materials for its members, including a directory of group meetings. Narcotics Anonymous, 16155 Wyandotte Street, Van Nuys, CA (818) 780-3951.

X. ADULT CHILDREN OF ALCOHOLICS (ACOA)

ACOA is a relatively new network of self-help groups for the children of alcoholics, both young and old. ACOA programs are based on the recognition that family members, especially children, are also victimized by alcoholism, and that the trauma of growing up in an alcoholic family may be lifelong, requiring counseling and support. Adult Children of Alcoholics, P. O. Box

880517, San Francisco, CA 94188 (415) 931-2262. The National Association for Children of Alcoholics (NACOA) publishes magazines, pamphlets and other information for children of Alcoholics. They do not arrange meetings. NACOA, 31582 Coast Highway, Suite B, South Laguna, CA 92677, (714) 499-3889.

XI. SAFE RIDES

Safe Rides is a nationwide program that is frequently affiliated with the Boy Scouts of America. Safe Rides is a loose network of local and regional initiatives that share a common philosophy and function. These programs provide a free and confidential safe ride to any young person who is in a condition to drive safely or who wants to avoid riding in a vehicle driven by someone who has been drinking or using drugs. Adult involvement in these programs is often limited to an advisory role.

XII. PARENT RESOURCES AND INFORMATION FOR DRUG EDUCATION (PRIDE)

PRIDE is primarily an information and referral resource for parents and other interested individuals. PRIDE maintains a comprehensive library of materials related to drug abuse and community action and awareness. PRIDE sponsors conferences and publishes a newsletter. PRIDE, Robert Woodruff Building, Volunteer Service Center, Suite 1012, 100 Edgewood Avenue, N.E., Atlanta, GA (1-800-241-9746).

XIII. ACTION

Drug Prevention Program, 806 Connecticut Avenue, N.W., Washington, D.C. 20525, (202) 634-9759.

The Action Drug Alliance's goal is to strengthen and expand community-based volunteer efforts in drug abuse prevention and education by awarding grants and contracts, sponsoring conferences and providing technical assistance services.

XIV. AMERICAN BAR ASSOCIATION

Advisory Commission on Youth, Alcohol, and Drug Problems
American Bar Association
1800 M Street, N.W,
Washington, D.C. 20036
(202) 331-2290

XV. AMERICAN COUNCIL FOR DRUG EDUCATION (ACDE)

Suite 110, 204 Monroe Street, Rockville, MD 20850, (301) 294-0600.

The American Council for Drug Education writes and publishes educational materials; reviews scientific findings; and develops educational media campaigns. The pamphlets, monographs, films, and other teaching aids on the health risks associated with drug and alcohol use are targeted at educators, parents, physicians, and employees.

XVI. THE AMERICAN LEGION

A Square Deal For Every Child, National Americanism & Children and Youth Division, P. O. Box 1055, Indianapolis, Indiana 46206, (317) 635-8411.

The American Legion has three education/prevention brochures that are geared toward elementary, junior high school students. In addition, American Legion members give drug education talks to community groups and schools if requested.

XVII. AMERICAN PROSECUTORS RESEARCH INSTITUTE

Center For Local Prosecution of Drug Offenses, 1033 North Fairfax Street, Suite 200, Alexandria, VA 22314, (703) 549-6790.

The Center For Local Prosecution of Drug Offenses provides local prosecutors with training, technical assistance, and effective techniques in dealing with drug cases.

XVIII. BENEVOLENT AND PROTECTIVE ORDER OF ELKS DRUG AWARENESS PROGRAM

c/o Mr. Richard Herndobler, Post Office Box 310, Ashland, OR 97520, (503) 482-3911.

The Elks, dedicated to volunteerism and public service, emphasize the health hazards of marijuana and cocaine in their campaign. The Elks also distribute large quantities of literature on substance abuse to local schools and present talks on the subject as well.

XIX. COCANON FAMILY GROUPS

P. O. Box 64742-66

Los Angeles, CA 90064

(213) 859-2206

Cocanon Family Groups is a 12-step program for those who are concerned about someone else's cocaine abuse.

XX. COMP CARE PUBLICATIONS

2415 Annapolis Lane

Minneapolis, MN 55441

1-800-328-3330

Comp Care Publications is a source for pamphlets, books, and charts on drug and alcohol use, chemical awareness, and self-help.

XXI. DRUG ENFORCEMENT ADMINISTRATION

1405 Eye Street, N.W.

Washington, D.C. 20537

(202) 786-4096

The Drug Enforcement Administration offers a wide variety of information on how to implement drug programs including those for student athletes, the workplace, and the community.

XXII. HAZELDEN EDUCATIONAL MATERIALS

Box 176, Center City, MN 55012, 1-800-257-0070 (in MN), (612) 257-4010 (AK and Outside US).

Hazelden Educational Materials publishes and distributes a

broad variety of materials on chemical dependency and recovery. A free catalog of materials is available through calling the toll free number.

XXIII. JUNIOR LEAGUE OF ATLANTA

Gate Awareness through Education (GATE), 3154 Northside Parkway, NW, Atlanta, GA 30327, (404) 261-7799.

Through its GATE program, the Junior League of Atlanta conducts programs and distributes educational materials aimed at grade schoolers, especially those in grades 3 through 5.

XXIV. KIWANIS INTERNATIONAL

Public Relations, 3636 Woodview Trace, Indianapolis, IN 46268, (317) 875-8755.

Kiwanis International has available for general distribution (in nine languages) public awareness/relations items for billboards, radio and TV public service announcement spots, and print ads. It has developed a teaching manual, for grades 4 through 6, entitled "Choices about Drugs."

XXV. LIONS CLUB INTERNATIONAL

Special Research and Development, 300 22nd Street, Oakbrook, IL 60570, (312) 571-5466.

The Special Research and Development staff has developed drug awareness materials that emphasize drug prevention through education and that include information on how to get involved in

the local community. In conjunction with Quest International, the Lions Club has developed an educational curriculum entitled "Skills for Adolescents," a one-semester course to teach 10-14 years olds how to make responsible decisions and how to combat the adverse influences of peer pressure.

XXVI. NAR-ANON FAMILY GROUP HEADQUARTERS, INC.

World Service Office

P. O. Box 2562

Palos Verdes Peninsula, CA 90274

(213) 547-5800

A support group to Narcotics Anonymous, NAR-Anon is structured similarly to AL-Anon and follows its 12-step program. Started in 1960, NAR-Anon services families and relatives of drug users throughout the world.

XXVII. NARCOTICS EDUCATION, INC.

6830 Laurel Street, NW, Washington, DC 20012, (202) 722-6740 (DC and AK), 1-800-548-8700.

A non-profit organization who, for 35 years, has published pamphlets, books, teaching aids, posters, audio-visuals, and magazines with drug-free messages. Its periodicals, **LISTEN** and WINNER, teach reading and life skills and drug prevention. A free catalog (**"The Health Connection"**) and samples of **LISTEN** and WINNER are available by calling the toll free number.

XXVIII. NATIONAL ASSOCIATION FOR CHILDREN OF ALCOHOLICS (NACOA)

31582 coast Highway, Suite B, South Laguna, CA 92677, (714) 499-3889.

NACOA publishes magazines, pamphlets and other information for children of alcoholics. It does not arrange meetings. For information about local meetings of Adult Children of Information contact the ACA Center Service Board, (213) 534-1815 (see above listing).

XXIX. NATIONAL ASSOCIATION OF SECONDARY SCHOOL PRINCIPALS (NASSP)

1904 Association Drive

Reston, VA 22091

(703) 860-0200

NASSP advances middle and high school education and provides leadership in such matters as administration and supervision, research, professional standards, and national education problems.

XXX. NATIONAL BOARD OF THE YWCA (YOUNG WOMEN'S CHRISTIAN ASSOCIATION) OF THE U.S.A.

726 Broadway

New York, New York 10003

(212) 614-2827

The YWCA promotes a combined drug and alcohol prevention program for girls and adults called "Women As Preventers: An

Adult-Teen Partnership."

XXXI. NATIONAL COUNCIL OF JUVENILE AND FAMILY COURT JUDGES

P. O. Box 8970, University of Nevada/Reno, Judicial College Building #118, Reno, Nevada 89507, (702) 784-1662.

The National Council of Juvenile and Family Court Judges provides the report, "Juvenile and Family Substance Abuse: A Judicial Response"; technical assistance on issues of dependency, delinquency, and the substance abuse problem; and information on screening, prevention, identification, assessment, and evaluation.

XXXII. NATIONAL COUNCIL ON ALCOHOLISM

12 W. 21st Street, New York, New York 10010, (212) 206-6770 (office), 1-800-NCA-CALL (hotline).

The National Council on Alcoholism's two leading missions are to provide education and advocacy on behalf of alcoholics, other drug dependent people, and their families. NCA has 200 affiliates that provide information and referral in states and localities.

XXXIII. NATIONAL CHILD SAFETY COUNCIL

P. O. Box 1386

Jackson, Michigan 49204

(517) 764-6070

The NCSC produces booklets, kits and other materials for

schools to use in drug and alcohol education curricula.

XXXIV. NATIONAL ORGANIZATION ON LEGAL PROBLEMS OF EDUCATION

3601 Southwest 29th

Suite 223

Topeka, KS 66614

(913) 273-3550

The National Organization on Legal Problems of Education disseminates information on judicial decisions including those relating to drug use in education.

XXXV. NATIONAL PARENT-TEACHER ASSOCIATION (P.T.A)

700 North Rush Street

Chicago, Illinois 60611-2571

(312) 787-0977

The National P.T.A. provides information on how to talk with children about drugs and alcohol, and produces idea guides on how to implement drug and alcohol prevention programs.

XXXVI. NATIONAL SCHOOL BOARDS ASSOCIATION

Council of School Attorneys, 1680 Duke Street, Alexandria, VA 22314, (703) 838-NSBA.

The Council of School Attorneys provides a national forum on the practical problems faced by local public school districts and the attorneys who serve them. This organization conducts programs and seminars and publishes monographs on a wide range of

legal issues - including drug use - that affect public school districts.

XXXVII. NATIONAL SELF-HELP CLEARINGHOUSE

33 West 42nd Street, Room 620-N, New York, NY 10036, (212) 840-1259.

The Clearinghouse provides information and training on self-help, carries out research activities, maintains data bank for self-help referral, and publishes manuals, training materials, and a newsletter.

XXXVIII. STUDENTS TO OFFSET PEER PRESSURE (S.T.O.P.P.)

10 Lindsey Street

Hudson, NH 03051

(603) 889-8163

S.t.O.P.P. provides information and technical assistance on implementing drug prevention programs.

XXXIX. WASHINGTON LEGAL FOUNDATION

Courtwatch

1705 N Street, N.W.

Washington, D.C. 2000

(202) 857-0240

"Courtwatch" monitors what happens to drug dealers in the court system.

XXXX. YMCA (YOUNG MEN'S CHRISTIAN ASSOCIATION)

101 N. Wacker Driver

Chicago, Illinois 60606

(312) 977-0031

Your local YMCA can provide information on what programs and resources are available.

XXXXI. YOUTH WHO CARE

Box 4074

Grand Junction, CO 81502

(303) 245-4160

Youth Who Care provides information on starting drug abuse prevention youth groups.

XXXXII. FEDERAL SOURCES

A. Office of Substance Abuse Prevention

Room 9A-54 5600 Fisher's Lane

Rockville, MD 30857

(301) 443-0365 or (301) 443-0377

This office funds many community prevention programs with an emphasis on high risk populations.

B. Director's Office (202)634-9132

This office provides seed money to projects using volunteers. It is particularly

interested in parents groups and minority communities.

C. Dept. of Education: Drug-free Schools

(202) 732-4599. This is for programs funded directly by the Department of Education to the community. For college based programs call (202) 245-8100. To learn about the Regional Training Centers call (202) 732-4599.

EFFECTS OF DRUGS AND ALCOHOL

Chapter 6

THE EFFECTS OF ALCOHOL AND OTHER DRUGS

This chapter will overview the effects of alcohol and other drugs on the human body, and their relationship to driving ability. An in-depth discussion of the NHTSA/LAPD Drug Evaluation and Classification Program will be made detailing the classifications of drugs that impair driving ability and the techniques utilized to detect the signs and symptoms of that impairment.

I. OVERVIEW OF ALCOHOL AND DRUGS:

Alcohol and Driving:

Alcohol is the most commonly abused drug in this country, and its effects on highway safety have been devastating. Each year, tens of thousands of people die in traffic crashes. Throughout the nation, alcohol is the major contributing factor in traffic fatalities. Studies show that nearly half the drivers who die in crashes have been drinking and most dead drivers are legally "under the influence". Alcohol related crashes are about nine times more likely to result in death than are similar crashes that do not involve alcohol.

While on the average 2% of drivers on the road at any given time are legally under the influence of alcohol, DWI violations and accidents are not simply the work of a relatively few problem drinkers. Many people drive impaired. In numerous

random surveys of drivers stopped during late evening hours, approximately 10% were legally under the influence. It is estimated that the typical DWI violator drives drunk about 80 times per year or about once every 4 to 5 nights.

The percentage of alcohol in a person's bloodstream is the Blood Alcohol Concentration, or BAC. Most states consider a BAC of 0.10% as evidence of alcohol impairment or intoxication for drivers.

Five major factors determine the BAC an individual will reach at any given time. First, the amount of alcohol consumed; the more a person drinks the more alcohol will be in the blood. Second, the time spent drinking; the average persons's liver will burn up about 0.4 ounces of alcohol per hour. That is the equivalent of about one ounce of liquor, four ounces of wine, or eight ounces of beer. If a person spaces his or her drinks over a long period of time, the alcohol will be eliminated from the body and the BAC will not rise. If the drinks are consumed quickly though, the BAC will also rise rapidly. Third, the person's body weight;' generally the more a person weights, the more blood and other fluids in the body. If two people drink the same amount of alcohol during the same period of time, the lighter person will reach a higher BAC than the heavier person. Fourth, the presence of food in the stomach; if a person drinks on an empty stomach, the alcohol will be absorbed quickly into the blood and the BAC will rise rapidly. If a person drinks on a full stomach, the food will slow the passage of the alcohol from

the stomach to the blood. The fifth and final factor is a person's gender. A woman's body contains proportionately ore fatty tissue than that of a man. This type of tissue contains less blood and other fluids than does muscle tissue. Thus, if a man and woman weigh the same and drink the same amount during the same period of time, the woman's BAC will be somewhat higher.

The effects of alcohol on the human body have been established by literally hundreds of scientific research studies. Alcohol is a depressant drug, it slows down the functions of the brain and central nervous system. It also reduces coordination and reflex action, impairs vision and judgment.

The safe operation of a motor vehicle is dependent on a number of skills and abilities, both mental and physical. Alcohol has been proven to impair abilities such as divided attention quite severely. Driving requires a person to divide his or her attention between many tasks which include steering, braking, speed control and reacting to other traffic on the highway. Alcohol also lowers inhibitions, causes drowsiness and distorts emotions which can lead to over and under reactions with a loss of control. Drinking drivers are more likely than other drivers to take risks such as speeding or turning abruptly. Drinking drivers are also more likely than other drivers to have slowed reaction times. They may not be able to react quickly enough to slow down before crashing.

Symptoms of alcohol impairment are well documented. They include slurred speech, bloodshot, watery eyes, poor

balance, odor of alcohol on the breath and a distinct jerking of the eyes called Horizontal Gaze Nystagmus. Law enforcement officers utilize a series of field sobriety tests to determine the alcohol impairment of suspected drunk drivers. The most commonly used roadside tests include an examination for Horizontal Gaze Nystagmus and two divided attention evaluations called the Walk and Turn and One Leg Stand.

Horizontal Gaze Nystagmus is a disfunction of the movement of the eyes, which is brought on by impairment from alcohol and some other drugs. This disfunction becomes apparent in a jerking, twitching or bouncing of the eyes under certain circumstances. To test for mystagmus, a suspect is instructed to hold the head still and follow the motion of a small object such as a pen or penlight with the eyes only. If impairment is present, the eyes will display an easily observable jerking or bouncing. Generally the more severe the impairment, the more pronounced the disfunction.

The two divided attention evaluations test the suspect's ability to divide attention between mental and physical tasks. In the Walk and Turn Test, the person is required to maintain a heel to toe position while listening to instructions and then walk heel to toe for nine steps while counting, balancing, and keeping the arms to the side of the body. On a One Leg Stand Test, a suspect is required to stand on one foot for 30 seconds while maintaining balance, counting out loud, and holding both arms down to the side of the body. Several

scientific validation studies revealed that while sober persons could perform these tests quite well, those impaired by alcohol and certain other drugs were unable to maintain balance and follow the instructions given to them.

Drug Use and Driving:

The best available data indicates that tens of millions of Americans use drugs other than alcohol. Generally, people who sue and abuse drugs do so because they enjoy the feelings that drugs produce. Drugs usually work in several ways. They can either speed up bodily functions or slow them down, and they may send confusing or distorting signals to the brain and they can block or prevent body functions or activity completely. Drugs may cause these effects singularly or in combinations.

Drugs are introduced into the body in a variety of ways. They produce their effects when they enter the bloodstream and pass into the brain. Certain drugs manage to pass swiftly into the brain thus, those drugs tend to take longer to enter the grain. The onset of effects of those drugs is usually delayed.

When drugs enter the body, then encounter other chemicals found in the blood, brain, and other body tissues and organs, a chemical reaction takes place and the drug turns into a new substance or combination of substances. This natural process is called metabolism. The new substances are called metabolites. In some cases, the metabolite produces the impairing effects associated with the drug taken. An example of this is Heroin. When Heroin is taken into the body, it is quickly metabolized

into Morphine. It is the Morphine that produces the clinical signs and symptoms which are associated with heroin. Metabolites are very important in the process of chemical testing. When blood and urine screening is performed for drug use, it is the metabolite of the drug that the analysis looks for. If a positive result is found, it may indicate that the suspected drug was in the person's body sometime in the recent past because the metabolite of that drug was found. Some metabolites may remain in the body for days and even weeks after drug use.

The use of drugs other than alcohol by drivers has become an issue of great concern to highway safety experts in recent years. Given the frequency of drug use in our society, today it is a logical assumption that many people who drive do in fact use drugs. This is especially disturbing considering the impairing and long term effects of some drugs. Information from studies of drivers involved in highway crashes indicates a substantial percentage of drug use. The National Highway Traffic Safety Administration recently published a review of several studies of chemical tests performed on drivers fatally injured in crashes. The studies consistently showed more than 10% of the drivers had used impairing drugs. Some research indicates an incidence of drug use, such as marijuana, well in excess of 30% A growing body of literature suggests that drugs such as marijuana, PCP, and tranquilizers, impair significantly the psychological and behavioral abilities that are required for safe driving.

II. RECOGNIZING THE EFFECTS OF DRUG USE:

The LAD Drug Recognition Program:

During the 1970's, the Los Angeles Police Department pioneered a drug recognition procedure that identified drug impairment through a series of clinical and psychological examinations. The original impetus for the program stemmed from numerous encounters, by police officers, with drivers who were clearly impaired, but whose BAC was very low or zero. Although the officers suspected that these persons were under the influence of some drug, they had no means of making a satisfactory diagnosis. Through the efforts of several LAD officers which included independent research, consultations with physicians and numerous case studies, a three step process of drug recognition was developed.

The Drug Evaluation and Classification Process is a standardized, systematic method of examining a person suspected of impaired driving on some other alcohol and/or drug related offense to determine:

1. Whether the suspect is impaired; and if so,
2. Whether the impairment is drug related or medically related (i.e., injury or illness); and if drug related,
3. The broad category (or combination of categories) of drugs that is the likely cause of the impairment.

This process is not a substitute for a chemical test. Although the procedure usually supplies an articulate basis for suspecting that a particular category of drugs has been recently used by a person, it does not establish the exact drug that was injected. More positive proof lies with blood or urine analysis.

Proof of the effectiveness of the program began to be accumulated shortly after it was officially recognized in 1979. LAD personnel demonstrated that they could conduct examinations that led directly to the conviction of drug impaired drivers and other drug law violators. Scientific evidence that the procedure was accurate was also made in the early 1980's. The National Highway Traffic Safety Administration sponsored a controlled laboratory evaluation of the LAD program at John's Hopkins University in Baltimore, Maryland. The LAD officers' performance in this laboratory experiment was excellent. They correctly identified the category of drugs, the drug impaired subjects, and the sober subjects in over 90% of the cases. In a follow-up field evaluation study in which 173 suspected drug impaired drivers were evaluated and tested, the LAD experts were able to identify impairment in 92.5% of the subjects. This study was compounded by the fact that some suspects were using two or more drugs in their systems.

The Drug Evaluation and Classification Procedure is a systematic process because it is based on a variety of observable signs and symptoms that are known to be reliable indicators of drug impairment. A trained Drug Recognition Technician (DRT)

reaches a conclusion based on the total aspect of the examination which includes observations of a suspect's appearance, behavior, performance or psychophysical tests, eyes and vital signs.

This process is broken down into 12 major components. First, a breath alcohol test is given to determine the person's BAC. By obtaining an accurate measurement of BAC, the DRT can determine whether alcohol may be contributing to the observable signs of impairment, if alcohol is the sole cause of impairment, or if no alcohol is present. Frequently, suspects have consumed both alcohol and other drugs.

Second, the officer or person who first observed the suspect are interviewed. Evidence of drugs or paraphernalia and statements made concerning drug use are all very important considerations as to the possibility of drug use.

Third, the DRT conducts a preliminary examination of the suspected drug user. This is a series of questions, observations, and simple tests to determine if the person may be suffering from injury or some other condition that my not be related to drug use.

Fourth, the eyes are examined for Gaze Nystagmus and for a lack of convergence. Certain categories of drugs induce Nystagmus. The presence of this phenomena and its degree can shed light on the possible presence of those drugs and the extent of the impairment. The inability of the eyes to converge toward the bridge of the nose also gives evidence of the possible presence of certain types of drugs.

Fifth, divided attention tests such as the Walk and Turn, One Leg Stand and others, are administered to the suspect. The person's performance on these tests measures the degree of psychophysical impairment. Errors made during the performance or inability to perform these tests may provide evidence of impairment by certain categories of drugs.

Sixth, systematic checks of the size of the pupils of the suspect's eyes are made, as well as how the pupils react to various degrees of light. Certain categories of drugs affect the eyes, especially the pupils, in predictable ways. A thorough check of the person's nose and mouth also can provide important clues as to how a drug was ingested.

Seventh, a person's vital signs are systematically checked. Some categories of drugs may evaluate blood pressure and pulse rate, raise the body temperature and cause breathing to become rapid. Other drugs would have the opposite effects. Vital signs can provide much evidence of the presence and impairment of a variety of drugs.

Eighth, a subject is examined for muscle rigidity. Certain categories of drugs cause the muscles to become tense and rigid.

Ninth, a thorough examination of the suspect for injection sites can also provide valuable evidence. Certain users of various categories of drugs ingest their drugs with hypodermic needles. Evidence of needle use, such as scars or tracks, may be found on veins along the neck, arms, hands, legs

and feet.

Tenth, a discussion with the suspected drug user is made by the DRT. The evidence and observations developed during the first nine steps of the evaluation can now be used to interview the suspect.

The eleventh step is the final opinion of the evaluator. The DRT should now be able to reach an informed conclusion, based on all the observations made during the evaluation, as to whether the suspect is under the influence of a drug or drugs and, if so, the category or categories of drugs causing the impairment.

The final step of the drug evaluation and classification procedure (DECP) is a toxicological examination. This chemical test or series of tests will provide scientific evidence that substantiates the DRT's conclusions.

Definition and Classification of Drugs:

The word "drug" means many things to many people. The word is used by different people in a number of different ways to convey some very different ideas. One dictionary definition says a drug is a substance used in medicine. This definition seems to exclude any substance that has no medicinal value. One such substance that is not included in this definition is model airplane glue.

Still another dictionary definition says a drug is a substance administered for the prevention or cure of disease. Once again, this definition would not include many drugs that

cause impairment.

Drugs that are used and abused in society today, as we mentioned in the beginning of this chapter, do not fit these standard dictionary definitions. The key to defining drugs of abuse lies in the ability of these chemicals and substances to produce impairing effects on the human body that can be recognized through standardized evaluation procedures.

A non-medicinal definition that is especially useful is adapted from the California Vehicle Code, Section 312:

> "A drug is any chemical substance, natural or synthetic, which, when taken into the human body, can impair the ability of the person to operate a motor vehicle safely."

This is a simple enforcement oriented definition that, although it is most appropriate for those drugs that impair driving, it is also quite useful for this discussion of drugs in general. Based on this definition, there are seven broad categories. These categories are distinguished from one another on the basis of the observable signs and symptoms of impairment they produce. These are also the basic categories of drugs utilized in the LAD Drug Evaluation and Classification Procedure.

Central Nervous System Depressants:

Central Nervous System (CNS) Depressants slow down the operations of the brain. They first affect those areas of the brain that control a person's conscious, voluntary actions. As dosage increases, Depressants begin to affect the parts of the

brain that control the body's processes such as heartbeat and respiration.

The most familiar Depressant drug is alcohol. With some minor exceptions, all Depressants affect people in quite similar ways, as does alcohol. Other CNS Depressants include Barbiturates such as Seconal (sometimes called Reds or Red Devils), Pentobarbital (Yellows or Yellow Jackets), and Phenobarbital (Pink Ladies). Non-Barbiturates such as Chloral Hydrate (Mickey Finns or Knock-Out-Drops), Diriden, Methaqualone (Quaaludes), and Equanil are all frequently abused. Probably the most well known type of Depressant drugs, other than alcohol, are the anti-anxiety tranquilizers such as Valium, Librium, Thorazine and Xanax. It has been estimated that at any given time in this country, there are some six million users of these types of prescription drugs.

Depressants are usually taken orally in the form of pills, capsules or liquids. Some suers prefer to inject substances such as Barbiturates. These users may experience a flash or rush from the injection that they do not experience from oral ingestion. Although much of the paraphernalia used to inject these drugs is similar to Heroin, these users frequently suffer swelling and ulcerations due to the high alkaline content of the Barbiturate drugs.

In general, people under the influence of any CNS Depressant look and act like people under the influence of alcohol. These effects include:

- "Drunken" behavior and appearance
- Reduced social inhibitions
- Slowed reflexes
- Impaired judgment and coordination
- Impaired vision and concentration
- Slurred, incoherent speech
- Drowsiness
- Disorientation
- Euphoria, uncontrolled laughing and crying
- Impaired divided attention ability
- Gaze Nystagmus
- Lowered pulse and blood pressure
- Shallow breathing

In high enough doses, CNS Depressants can produce a general anesthesia. In extremely high doses, coma and death can occur.

Depressant drugs have a wide variety on onset and duration of effects. Some CNS Depressants act very quickly, and begin to affect their users within seconds. Others act more slowly, sometimes taking one-half hour or more to begin exerting influence on the user. The quick acting Depressants also tend to be relatively short in duration. In some cases, the effects wear off in a matter of minutes. The slow acting Depressants, on the other hand, tend to produce longer lasting effects. Depressants that take effect within 10-30 minutes and last from 4-8 hours are usually the most preferred by drug abusers. Examples of these

drugs are Seconal, Secobarbital, Valium, Librium and Xanzx. Very short acting Depressants such as Pentothal (Truth Serum) are rarely abused because the effects don't last long enough to satisfy most abusers. The long acting Depressants such as Barbital take nearly an hour to begin affecting a person, and may last from 8-14 hours. Again, these drugs, although they have a valid medical use for elipepsy and other conditions, are not preferred by abusers because they take too long to begin their effects.

Central Nervous System Stimulants:

Central Nervous System (CNS) Stimulants speed up the operation of the brain and spinal cord, and accelerate heart rate, respiration and many other body processes. It is most important to note that "speed-up" does not mean improve or enhance. CNS Stimulants do not make the brain and other body functions work better. They do make the nervous system and other body processes work harder, which often results in disfunction or mistakes.

CNS Stimulants constitute a widely abused category of drugs. The two most common drugs are Cocaine and Amphetamines. There appear to be 15-20 million Americans who regularly use Cocaine or "Crack", while several million persons also abuse Amphetamines.

Cocaine is made from the leaves of the Coca plant, an evergreen native to South America, while Amphetamines are synthetically produced drugs. Many Amphetamines are manufactured

for legitimate medical reasons such as control of narcolepsy, control of hyperactivity in children, relief of fatigue, control of appetite and treatment of Parkinson's disease. Unfortunately, these drugs are subject to great abuse. Examples of Amphetamines such as these include Dexedrine (Dexies), Benzedrine (Bennies), and Biphetamine (Black Beauties). Some Amphetamine-type Stimulants are manufactured illegally in clandestine laboratories. The two most common of these drugs are Methamphetamine (Crack, Crystal, Meth) and Amphetamine Sulfate.

There are many ways in which CNS Depressants are taken by abusers. Cocaine and Methamphetamine is sometimes injected directly into the vein of the user. Cocaine is commonly snorted. Smoking or free basing cocaine has become the most popular method. In order to be smoked, a pure form of Cocaine is needed. Various chemical processes can be used to separate the pure cocaine from the impurities it is commonly found with. The pure cocaine is called "Free Base". One of the processes used to "Free Base" Cocaine produces the pure Cocaine found in the form of small hard crystals. These crystals are often called "Crack" or "Rock Cocaine". The Amphetamines produced by pharmaceutical companies and the illicitly produced Amphetamine Sulfate are usually made into tablets or capsules for oral ingestion.

Cocaine and Amphetamines produce a euphoric effect, a feeling of great strength and self confidence. With Cocaine, there may also be an anesthetic or pain killing effect. Stimulant users tend to become hyperactive, nervous, extremely

talkative, and unable to remain still. Stimulants also tend to release the user's inhibitions and impair the ability to perceive time and distance. Persons under the influence of the drugs become confused easily and are unable to concentrate on even simple tasks.

The effects of CNS Stimulants are quite similar. They include:

- Marked increase in pupil size in all conditions of light
- A slowed reaction to light by the pupils
- Temperature raised
- Body tremors (shaking or trembling)
- Loss of appetite
- Exaggerated reflexes
- Restlessness

Injection sites may be found on the users of some of these drugs, especially Methamphetamine. Cocaine users who routinely snort this drug may have a severe redness to the nasal area and even ulceration or scarring of the nasal tissues.

Cocaine is a fairly fast acting drug with a short duration of effects. Depending on the method of ingestion, the effects vary somewhat. When smoked or "Free Based", the effects begin almost immediately and last for 5-10 minutes. When injected, the effects begin within a few seconds but may last for an hour or so. When snorted, the effects begin usually within 30 seconds and last from 30 to 90 minutes. Amphetamine effects, on

the other hand, last much longer. Depending on the method of administration, the onset may be similar to Cocaine. However, the effects may last from 4-8 hours.

Hallucinogens:

Hallucinogens are drugs that cause hallucinations. They create apparent perceptions of things that are not really present. One common type of hallucination produced by these drugs is called synesthesia, a transposition of sensory modes. For example, a particular sight may cause the user to perceive a sound. Hearing a sound may cause the user to see bright lights. Still other sights may cause someone to smell a particular odor. Hallucinations may be quite frightening to the user. The so called "Bad Trips" have been known to drive some users into permanent insanity.

Some Hallucinogenic drugs come from natural sources. Peyote is an Hallucinogen found in a particular specie of cactus that is sometimes used in religious ceremonies by some American Indian Tribes. Psilocybin is a drug found in a number of species of mushrooms that have hallucinogenic properties.

Other Hallucinogenic drugs are synthetically manufactured. LSD is probably the most famous of these drugs. MDA, MMDA, STP, DET, and DMT are other synthetic Hallucinogens. They have effects similar to those of extremely high doses of CNS stimulants.

Hallucinogen abusers usually take their drugs orally. Psilocybin, Mushrooms and Peyote "Buttons" can be eaten in their

natural state. LSD is often placed on bits of paper, or on sugar cubes, and eaten. Some users snort the powder forms of MDA and Peyote, while others occasionally inject LSd.

In general, Hallucinogens intensify whatever mood the user is in when the drug is taken. If the user expects that the drug will help him or her achieve an expanded consciousness, the drug will seem to have that effect. Unfortunately, the use of these drugs often uncovers mental or emotional flaws of which the user was unaware. These flaws can result in a "Bad Trip" even though the user was expecting an effect of pleasure or happiness.

Although the most common effect of an Hallucinogen is hallucinations, there are several effects that may be seen with these drugs, such as:

- Increased pupil size
- Elevated pulse and blood pressure
- Rapid respiration
- Elevated temperature
- Muscle Rigidity
- Body tremors
- Disorientation and incoordination
- Nausea
- Difficulty in speaking
- Dazed appearance

The effects of these drugs usually begin within one-half hour of ingestion. Peyote's effects begin with nausea and rise in blood pressure, pulse and body temperature. After an

hour, hallucinations may begin and last for 10 to 12 hours. Psilocybin begins with dizziness and blurred vision. Within an hour, vision and hearing are affected. The user may feel euphoria and see bright colors and strange patterns. The effects usually last for 2 to 3 hours. LSD's effects begin with a rise in pulse, blood pressure and body temperature. The hair may stand on end and nausea, dizziness and headaches are common. The effects peak in 4 to 6 hours and may last for 10 to 12 hours. MDA affects the body in a somewhat similar fashion as does LSD, although the effects peak in 2 hours and will dissipate within 8 hours.

There is some evidence that prolonged use of LSD may produce brain damage, which may lead to impaired memory, reduced attention span and mental confusion.

Phencyclidine (PCP):

Phencyclidine is a category of drugs that includes PCP and various analogs. The effects of PCP and its analogs are unlike those of any other category. In some respects, PCP acts like an Hallucinogen. However, it also creates impairment similar to Depressants and Stimulants.

PCP is a synthetic drug. It does not occur naturally and must be produced in a laboratory-type setting. PCP was first developed in the 1950's as an anesthetic for surgery. Within several years, as evidence of PCP's quite undesirable side effects became known, its use as an anesthetic for humans was discounted. It continues to have limited uses in veterinary

medicine.

PCP is relatively easy to manufacture. The formula for producing PCP has been widely publicized and the necessary chemicals are readily available. Although it is easy to make, though, it is also quite dangerous to make. Fires, explosions and toxic fumes have resulted in many deaths and injuries. Also, liquid PCP is especially dangerous in that it can be absorbed through the skin.

PCP has been called Sernyl, Sernylan and Ketamine, when used medically. Its street names are numerous, including; Angel Dust, Devil Dust, Super Kools, Killer Weed, Crystal, Peace Pills, Elephant Tranquilizer, Super Weed and Zombie Weed.

PCP is similar to CNS depressants in that it depresses brain activity such as:

- Slows down verbal responses, thought and reaction time
- Slow, slurred speech
- Severe divided attention impairment
- Gaze Nystagmus

PCP is also similar to CNS stimulants in that it activates parts of the brain that control emotions, the heart and other autonomic systems such as:

- Increased pulse and blood pressure
- Elevated body temperature
- Muscle rigidity
- Increased adrenaline production

These drugs also produce effects similar to Hallucinogens in that they distort the signals received by the brain. These effects include:

- o Distorted sense of sight, hearing, taste, smell and touch
- o Distorted perception of time and space
- o Feelings of paranoia and isolation

Still other symptoms include:

As with many other drug categories, the onset and duration of effects usually varies with the method of administration. When smoked or injected, PCP's effects generally are felt within a few minutes. When snorted, the onset is also fairly rapid. The effects reach their peak in 15 to 30 minutes and usually last from 4 to 6 hours.

The overdose effects of PCP are often bizarre, violent and self-destructive. The extreme physical and psychological effects of PCP can result in a deep coma, seizures and convulsions, respiratory depression, possible cardiac problems and even death.

Narcotic Analgesics:

Narcotic Analgesics include the natural derivatives of Opium and synthetically produced substances that have similar effects. The word "Analgesic" means pain killer. All of the drugs in this category reduce the person's reaction to pain. Generally, all Narcotic Analgesics share three characteristics. They all relieve pain and will produce withdrawal symptoms when

use of the drug is stopped after chronic administration, and the use of these drugs will also suppress the symptoms of withdrawal. In other words, the use of these drugs will cause addiction.

Opium, or its refined powder, is a product of the raw Opium plant. It is sometimes used medically to treat diarrhea. Morphine is a direct derivative of Opium. It is used primarily to suppress pain. Codeine is also a derivative of Opium. It is used to suppress coughing and minor pain. Heroin is derived from Morphine and was produced unsuccessfully as a non-addictive substitute for Morphine. Dilaudid, also a Morphine derivative, is sometimes called a "Drug Store Heroin" because it is available by prescription for the relief of severe pain.

Synthetic Opiates include Demerol, which is widely used for the relief of pain and for sedation. Methadone is used extensively in the treatment for Heroin addiction due to its longer lasting effects than Heroin.

Synthetic Opiates include Demerol, which is widely uses for the relief of pain and for sedation. Methadone is used extensively in the treatment for Heroin addiction due to its longer lasting effects than Heroin.

Methods of ingestion vary from one Narcotic Analgesic to another. Heroin and some others are usually injected. Many are taken orally in capsule or tablet form. Opium is usually smoked. Some are also used in suppository form.

People develop tolerance to Narcotic Analgesics fairly rapidly. A Narcotic Analgesic user who has developed a tolerance

to these drugs and has taken a normal dose may show little or no evidence of impairment. However, a new user or a user taking more than their normal dose will exhibit marked signs of impairment.

One of the most easily observable effects of Narcotic Analgesic use is a condition known as "On The Nod". This is a sedative action of the drug which appears like a semi-conscious sleep. Other effects include:

- Severely constricted pupils
- Lowered pulse and blood pressure
- Lowered body temperature
- Slow and shallow respiration
- Poor motor coordination
- Depressed reflexes
- Clammy skin
- Convulsions and possible coma

The effects of Narcotic Analgesic can be fairly rapid when the drug is injected, usually beginning within several minutes. The duration of effects may last for 3 to 6 hours. An exception would be Methadone, which may last in excess of 10 to 12 hours. One important effect of these drugs is that withdrawal symptoms will begin after the primary effects of the drugs wear off. These symptoms can become quite severe if the user does not take another dose of the drug.

Inhalants:

Inhalants include a wide variety of breathable

chemicals that produce mind-altering results. The fumes of these volatile substances are found in many common products. Generally, these substances can be placed in three major subcategories. Volatile solvents include model airplane glue, paint, gasoline lacquer, thinners and fingernail polish remover. The primary ingredient is Toluene. Aerosols are chemicals discharged byu propellant gases that include hair sprays, deodorants, insecticides and vegetable frying pan lubricants. Abused aerosols contain various hydrocarbon gasses that produce impairing effects. The third subcategory, Anesthetics, include substances that reduce pain and are used medically during surgery. These drugs include Ether, Chloroform and Nitrous Oxide.

The effects of Inhalants can vary from one substance to another.

Glue and other volatile solvents produce effects such as:

- A drunken appearance similar to alcohol intoxication
- Dizziness and numbness
- Euphoria
- Distorted perception of time and distance
- Possible hallucinations

Gasoline and other petroleum products cause effects such as:

- Nausea and excessive salivation

- Drowsiness
- Sensation of spinning and floating
- Light-headedness
- Fear and loneliness

Inhalants in general will cause:

- Slurred speech
- Gaze Nystagmus
- Lack of convergence
- Elevated pulse and blood pressure
- Severe divided attention impairment

Inhalants' effects are usually felt immediately. However, the duration of effects depends on the substance used. For example, glue, paint, gasoline and other commonly used Inhalants produce effects that last for several hours. Nitrous Oxide may last for only a few minutes.

Some Inhalants will depress the central nervous system to the point where respiration ceases. Others can cause heart failure. Some overdoses cause severe nausea and vomiting and unconsciousness. Long term effects can cause permanent damage to the central nervous system, liver, kidney damage and greatly reduced mental and physical abilities.

Cannabis:

Cannabisis the category of drugs derived from the Cannabis Sativa plant. The active ingredient in Cannabis-type drugs is Delta-9, Tetrahydrocannabinol or "THC". There are three basic forms of the drug Cannabis. Marijuana consists of the

dried leaves of the plant. Hashish basically is a concentrated version of marijuana. It is produced by crushing and boiling the leaves of the plant and allowing them to dry into a semisolid mass. Hashish Oil or "Hash oil" is a liquid extracted from Hashish.

Although Cannabis has very limited medical uses, such as in the treatment of Glaucoma and as treatment of nausea for cancer patients, it is highly abused. It is estimated that 20 million Americans regularly use marijuana. Marijuana and Hashish are usually smoked. Marijuana, Hashish and Hashoil may also be taken orally, e.g., baked in cookies and brownies and eaten.

Cannabis is neither a CNS Depressant nor a CNS Stimulant. It does, however, interfere with the attention process. Drivers under the influence of Cannabis-type drugs often do not pay attention to their driving. This may account for the high incidence of marijuana use in fatally injured drivers in recent crash studies. Cannabis intoxication also produces a variety of observable signs and symptoms such as:

- Severe divided attention impairment
- Diminished inhibitions
- Impaired perception of time and distance
- Disorientation
- Body tremors
- Severe reddening of the eyes
- Elevated pulse and blood pressure
- Slightly dilated pupils

Users of Cannabis drugs begin to feel and exhibit effects within 10 to 15 seconds after inhaling the smoke. The effects usually peak within 10 to 30 minutes and can last for 2 to 3 hours. Long term chronic Marijuana use can create paranoia and possible psychosis. Other effects may include lung damage, bronchitis, acute anxiety attacks and possible birth defects.

The National Highway Traffic Safety Administration (NHTSA) is working closely with the LAD to develop the DECP in locations outside of metropolitan Los Angeles. Strict guidelines have been set up to maintain the high standards of the program which include prerequisite training, legislation, demographics and logistics. For further information, contact NHTSA, Office of Alcohol and State Programs, 400 Seventh Street, NW, Washington, DC 20590.