

## 26. SUBSTANCE ABUSE

---

### *Goal*

To increase abstinence from substances while reducing experimentation, use and abuse, especially among Kentucky's youth, thereby reducing the consequences -- violence, crime, illness, death and disability -- that result from abuse of substances at great cost and harm to individuals and society.

### *Terminology*

**Abstinence:** No use of substances of abuse within the past year.

**Abuse:** Excessive quantity and/or frequency of use of one or more substances to a degree that is harmful, and may result in serious consequences or problems, for the user, the user's family or community, and which may or may not involve dependence on or addiction to the substance(s).

**Behavioral Factors:** Personal choices on behavior regarding substances; correlates and precursors which influence those choices; and consequences of personal choices and behaviors.

**Correlates and precursors:** influence choice of behaviors including risk and protective factors; personal attitudes and knowledge; and genetic predisposition. For example, a child of a parent who openly uses a substance has higher risk of becoming a user than a child in an abstaining household. Conversely, frequent interaction with peers who disapprove of substance use exemplifies a protective factor. An attitude that substance use is normal, or lack of knowledge about the harmfulness of a substance, tend to raise the likelihood that an individual faced with opportunity to use a substance will do so. An individual's genetic predisposition toward high or low physical tolerance for a substance, inherited from one or both parents, may become a factor in later development of problems. Though taxonomically distinct, genetic predisposition, attitudes, knowledge and other factors are often included in lists of risk and protective factors. In 1999, risk factors are a particular focus for substance prevention programming.

**Personal behavioral choice:** to abstain or use substances -- and the degree of use -- reflects each individual's response to 1) the surrounding environment and to 2) the correlates and precursors which influence the individual's inclination to choose for or against a substance(s). The three categories of substances -- tobacco, alcohol and drugs - - are subject to personal choices/decisions that occur on a continuum of human behaviors: i.e., choosing/deciding to abstain, to experiment, to use, to abuse [see separate definitions], and where applicable to seek, complete, or repeat treatment. These

gradations on a behavioral continuum enable useful distinction as to how each behavior relates uniquely to each substance category. Understanding the unique interrelationships in behaviors toward particular substances, and the correlates that influence behaviors, is essential for effective substance planning, goal setting, programming and evaluation.

**Consequences of behavior** include the statistical end results of individuals' choices to abstain, experiment, use or abuse substances as reflected in public health, crime, and personal and societal costs. Some examples include:

- Driving Under the Influence (DUI): mortality, morbidity and costs resulting from driving under the influence of alcohol or drugs;
- Cancer: deaths, disabilities and costs from cancer caused by smoking cigarettes and using smokeless tobacco;
- Avoidable costs borne by private insurance payers and Medicare/Medicaid resulting from liver cirrhosis and comparable consequences of long-term substance use and abuse.
- Any goals to reduce these consequences inherently must presuppose other goals that more directly target the personal behaviors that result in these consequences, and/or the correlates and precursors which influence personal choices and decisions on behavior toward substances.

**Binge drinking:** Five or more drinks in a row on one or more occasions during the past month. See Abuse definition.

**Environmental Factors:** Societal circumstances which influence individuals' attitudes and behaviors toward substances. **Community cultural** factors affect the supply, availability and price of substances; access to substances; local norms and values regarding substances; and the means through which these factors are applied, such as policing, churches and schools. **Infrastructure** factors include substance-related laws and ordinances at any level -- national, state or local; substance-related policies at any level down to and including individual facilities; and systemic capacity to influence substance availability, access and behaviors (including but not limited to capacity for data, planning, funding, programming, evaluation, measurement and assessment).

**Experimentation:** No more than five instances of use with a particular substance in a person's lifetime, and no use of the substance within the 30 days preceding the date the person provided the information.

**Relapse:** Reversion to a former pattern of abusive substance-related behavior (measured as the number of readmissions for treatment and the amount of time between treatment episodes).

**Substance:** The three broad categories of substances include: 1) tobacco (smoked and smokeless); 2) alcohol (in multitudinous classes of brewed and distilled beverages); and 3) drugs (marijuana and all other illicit drugs; improperly used prescription drugs and anabolic steroids; and use as inhalants of miscellaneous household products, solvents, gasoline, etc.).

**Use:** Any non-experimental use of a substance that does not constitute abuse of that substance. Widespread non-problematic consumption of alcoholic beverages in U.S. society and widespread public noncritical acceptance of such alcohol consumption as a cultural norm exemplify the distinction between use (which may or may not lead to abuse) and abuse (i.e., clearly excessive use harmful to self or others). The use-abuse boundary is a gray area.

## *Overview*

The combined costs of health care, law enforcement, motor vehicle crashes, crime and lost productivity caused by substance abuse have been calculated at nearly \$1,000 annually to every man, woman and child in America.<sup>1</sup> Applying this figure to Kentucky's 1998 population, the consequences of substance abuse cost a staggering \$3.9 billion each year in the Commonwealth.

Substance abuse and problems resulting from substance abuse are among the most pervasive concerns of Kentuckians. A great variety of serious health and social problems and enormous related dollar costs are associated with abuse of alcohol, drugs, and tobacco. Seventy-two conditions requiring hospitalizations, for example, are wholly or partially attributable to abuse of substances.<sup>1</sup>

Use of tobacco, alcohol, and illicit drugs all increase the risk of hypertension, stroke, and heart disease.<sup>2</sup> Tobacco is involved in one-third of all cancer deaths. Heavy alcohol use increases risk for cirrhosis and other liver disorders, which also may result from infection with hepatitis viruses. Use of cocaine and comparable drugs can produce cardiac irregularities and heart failure, convulsions and seizures. Cocaine use temporarily narrows blood vessels in the brain, contributing to risk of strokes as well as cognitive and memory deficits.<sup>1</sup> Some of the major consequences of long-term use of alcohol or drugs include chronic depression, sexual dysfunction, and psychosis.

Most substance abusers initiated use of tobacco and alcohol during adolescence and progressed to nicotine addiction, alcohol abuse, and illicit drug use. Accordingly Kentucky's substance prevention efforts place high priority on reducing substance use and promoting abstinence among adolescents, and reducing experimentation by young adolescents. Adolescent behaviors are especially influenced by policies and laws that limit youth access to tobacco, alcohol, and drugs, and by interventions that alter youths' susceptibility to peer pressure, norms and attitudes tolerant of substance use.<sup>3</sup>

Prevention and treatment of substance abuse requires that all abused substances be addressed – tobacco, as well as alcohol, marijuana, and other illicit drugs (including inhalants and steroids). Thus the separate tobacco chapter in *Healthy Kentuckians 2010* contains objectives which are within the scope of this chapter. Prevention of smoking and use of smokeless tobacco products are integral components of Kentucky's comprehensive substance abuse prevention strategy.

Used and abused substances are interrelated. In the most comprehensive national analysis ever undertaken on the “gateway effect,” Columbia University’s Center on Addiction and Substance Abuse found very high correlations between use of cigarettes and alcohol and subsequent use of marijuana and illicit drugs such as cocaine.<sup>4</sup> The Centers for Disease Control and Prevention reports that teens who smoke are three times more likely than nonsmokers to use alcohol; eight times more likely to use marijuana; 22 times more likely to use cocaine; and that smoking is associated with a host of risky behaviors such as fighting and engaging in unprotected sex.<sup>5</sup> Data from a 1996 survey of eight Kentucky school districts reveal that four times as many 10th-grade current smokers reported current use of marijuana (50 percent) as 10th graders who did not smoke during the past month. Some 4.3 times more current smokers report cocaine use than do non-smokers. The proportion of 10th-grade current smokers who cut school for a whole day during the past month is 28 percent compared to 9 percent for non-smokers -- a threefold difference.<sup>6</sup>

WASTED WEALTH: The Avoidable Costs and Consequences of Substance Abuse

Personal choices to use and abuse substances cause fully half of all *preventable* deaths. Alcohol and drugs together cause about 11 percent. Tobacco use accounts for another 39 percent -- by far the single greatest cause of preventable deaths throughout Kentucky and the nation.<sup>2</sup> Comparing the three classes of substances in terms of all U.S. deaths from all causes lends perspective:

<u>Substance-related Deaths</u>	<u>Cause of Death</u>	<u>% of All Deaths from All Causes</u> <sup>7</sup>
400,000	Tobacco	19%
100,000	Alcohol	5%
20,000	Illicit Drugs	less than 1%

*Tobacco-related mortality and morbidity.* For sheer magnitude, the problems caused by tobacco use are incredible. The Kentucky Medicaid program alone spent over \$111 million on care for smoking-attributable disorders in fiscal year 1994.<sup>8</sup> Among all tobacco products cigarettes are the most lethal, killing more Americans each year than illegal drugs, alcohol, car accidents, murders, fires, AIDS and suicides combined. Smokers have more hospital admissions, take longer to recover from illness and injury, have higher outpatient health care costs and lower birthweight babies. There is no safe level of tobacco use -- tobacco is the only legal product which when used exactly as intended causes addiction, disease and premature death.<sup>9</sup> See objectives in the chapter on tobacco.

Alcohol-related mortality and morbidity are significant in Kentucky and the nation. The more severe alcohol-related diagnoses as measured by hospital length of stay are alcohol dependence syndrome (7.7 days); cirrhosis (7.4 days); alcoholic psychosis (5.6 days); and non-dependent abuse of alcohol (3.2 days). Alcohol consumption is a major contributor in up to 95 percent of deaths from cirrhosis of the liver, which alone takes an average 318

lives in Kentucky each year. About 60-80 percent of these deaths are persons over age 45, among whom a third to a half are over age 65, evidencing the consequence of many years of heavy drinking.<sup>10</sup> Among Kentucky hospital discharges (1995) involving cirrhosis or alcohol-related liver disease or damage, 77 percent were between ages 51 and 70.<sup>11</sup>

*Alcohol and youth.* The extended heavy drinking patterns necessary to produce cirrhosis are typically established during the teen years and reinforced in early adulthood. Early alcohol use vastly increases the potential for dependence and addiction to both alcohol and drugs. Alcohol is frequently the first substance used by youths and is often used along with other substances. Underage drinking kills six times more young people every year than all illicit drugs combined.<sup>2</sup>

Vehicle crashes involving substances claim hundreds of lives every year in Kentucky. In 1995 the 278 lives lost in alcohol-related crashes represented one-third of all persons killed in all Kentucky traffic accidents. The 6,163 alcohol-related crashes that year injured 4,741 people. Teenage drinking drivers age 13-19 accounted for 10 percent of all alcohol-involved drivers and 15 percent of all teenage drivers in fatal accidents. Nearly one-fourth of the 57 fatally injured pedestrians in 1995 were drinking.<sup>12</sup> The dollar cost of crashes without alcohol involvement is three-fourths the cost when blood alcohol level is at least 0.1 percent -- the greater the alcohol involvement, the greater the cost per crash.<sup>2</sup>

In perspective, Kentucky drivers using alcohol pose 16 to 24 times greater problem and risk to public safety than drivers using drugs. Alcohol-using drivers were involved in 6,163 crashes which resulted in 278 deaths and 4,471 injuries. Drug-using drivers were involved in 406 crashes which resulted in 13 deaths and 327 injuries<sup>12</sup>:

*Drug-related mortality and morbidity.* Among young adults age 18-44, those who use marijuana are limited by illness or injury more often than non-users. Those who use both marijuana and cocaine are the most likely to lose workdays, be bedridden, or otherwise have restricted activity from illness or injury. Drug-related hospital emergency department visits have remained relatively stable in recent years, though heroin- and cocaine-related visits continue to increase. The four most frequently reported drugs associated with deaths are cocaine, heroin, alcohol-in-combination with other drugs, and codeine.<sup>2</sup>

*Crime Influenced by Alcohol and Drugs.* Abuse of drugs and alcohol is associated with commission of many crimes. More convicted jail inmates reported being under the influence of alcohol than of illicit drugs when they committed their most recent crime. Inmates convicted for violent and public order offenses were significantly more likely to be under the influence of alcohol. Inmates whose most serious offense was drug-related or a property crime were more likely to be under the influence of drugs than of alcohol during commission of the crimes. Among all convicted inmates, 13 percent said they committed their crimes to obtain money for personal drug purchases. Drug money

motivated one-third of inmates convicted for robbery and burglary, nearly one-fourth of larceny and fraud crimes, and one in five drug trafficking crimes.<sup>2</sup>

Of 249,000 arrests for all causes in Kentucky in 1995, fully 37 percent were related to charges involving drugs and alcohol -- far higher than any other category of crime. Alcohol-related arrests accounted for most of these (30 percent), and for nearly one-third of all arrests for all causes<sup>13</sup>:

Marijuana was involved in over half of arrests relating to drugs, though other categories of drugs were significant<sup>13</sup>.

## ***Progress Toward Year 2000 Objectives***

### Environmental Objectives

- 4.7. To enact the administrative driver's license/Kentucky revocation laws or a program of equal effectiveness for people determined to have been driving under the influence.

Baseline: 28 states and DC in 1990.

Administrative revocation legislation came before Kentucky's General Assembly twice during the 1990s and was defeated both times.

- 4.8. To increase to 75 the number of school districts providing onsite assessment and support services (Student Assistance Programs) for students experiencing problems related to their own or someone else's alcohol/drug use.

Baseline: 25 SAP programs in 1990.

A February 1999 survey reported 31 Student Assistance Programs operating in Kentucky. While this omits a number of additional programs that were initiated during the decade, the fact that some programs did not endure to become permanent local infrastructure is disappointing beside the target of 75 programs. Objective #2 for the year 2010 reflects growing engagement of alternative means for involving larger numbers of schools and school districts into Kentucky's evolving prevention infrastructure.

### Behavioral Objectives

#### *Experimentation*

- 4.4. To raise by at least one year the average age of first use of cigarettes, alcohol, and

marijuana by Kentucky adolescents ages 12-17.

Baseline (1988): age 11.6 for cigarettes; 13.1 for alcohol; 13.4 for marijuana.

Kentucky data have not been collected in a manner responsive to the “average age” language of the objective. The Kentucky Youth Risk Behavior Surveillance System (YRBSS) offers a near equivalent in terms of percentages of youths who first used substances “before age 13”:

Tobacco: 32 percent

Alcohol: 30 percent

Marijuana: 14.2 percent of 9th graders report they tried marijuana before age 13; 9.1 percent of 10th graders; 6.9 percent of 11th graders; 5.3 percent of 12th graders.

This report, like others in this chapter, exemplifies the continuing need to make Kentucky-based survey questions consistent with the language of the goals for which status is to be measured, to ensure that both goals and surveys employ nationally accepted core measures, and that both are consistent with national surveys to which Kentucky substance abuse statistics must be compared.

*Use*

- 4.5. To reduce by half the proportion of young people who have used alcohol, marijuana and cocaine in the past month.

	<u>Age</u>	<u>Baseline 1988</u>	<u>Target</u>
Alcohol	12-17	25.2%	12.6%
	18-20	57.9%	29.0%
Marijuana	12-17	6.4%	3.2%
	18-25	15.5%	7.8%
Cocaine	12-17	1.1%	0.6%
	18-25	4.5%	2.3%

Kentucky-specific data suitable for direct comparison with the baselines are unavailable. The Kentucky YRBSS 1997<sup>17</sup> provides reliable data on students in grades 9-12 from which possible inferences are: 1) past-month substance use has worsened significantly over the past decade, or 2) the baseline numbers were unreliable, or 3) both. Grades 9-12 substance use in past 30 days:

Alcohol 49.3%

Marijuana Boys 34%, girls 23%

Cocaine Boys 5.2%, girls 3.2%

This objective has not been met.

## Abuse

- 4.6. To reduce to no more than 28 percent the proportion of high school seniors engaging in recent occasions of heavy drinking of alcoholic beverages.

Baseline: 33 percent in 1989.

This objective has not been met. Of 12th graders, 45.1 percent reported bingeing on alcohol in the Kentucky YRBSS. The reported average for grades 9 through 12 was 37.1 percent.

## Consequences of Substance-Related Behaviors

- 4.1. To reduce by 10 percent deaths caused by alcohol-related motor vehicle crashes in Kentucky.

Baseline: 331 in 1989.

The objective has been achieved. The following trend is reported in Kentucky Traffic Accident Facts:

<u>Year</u>	<u>Persons Killed in Alcohol-Related Accidents</u>
1997	234
1996	256
1995	278
1994	287
1993	314
1992	303
1991	365

- 4.2. To reduce by 10 percent alcohol-related disease in Kentucky.

Baseline: 1,684 in 1988.

Data equivalent to the 1988 baseline are unavailable. However, cirrhosis of the liver is a reliable indicator for alcohol-related diseases, since up to 95 percent of deaths from cirrhosis involve abusive long-term alcohol consumption as a major contributor<sup>2</sup>. Cirrhosis is one among 21 categories listed as leading causes of death in Kentucky Vital Statistics Reports. Based on the most recent available cirrhosis death data over eight years, this objective has not been met.

<u>Year</u>	<u>Cirrhosis Deaths</u>
1997	352
1996	336
1995	332

1994	301
1993	306
1992	288
1991	348
1990	308

- 4.3. To reduce by 20 percent drug abuse related hospital emergency department visits. Baseline: 623 in 1989.

Data suitable for measuring progress toward this objective are not available.

## ***2010 Objectives***

- 26.1. Increase to at least 90 percent the proportion of primary care providers\* who report that they routinely monitor and screen all their patients for abuse of alcohol, tobacco and drugs including prescription drugs, discuss alcohol and drug interactions with these patients, and refer them for preventive or treatment services when appropriate.** \*Providers to include primary care physicians, physicians assistants, advanced registered nurse practitioners, and all primary care center clinicians.

**Target Setting Method:** Based on Dr. SmokeStopper survey baseline, January 1999. Of 630 primary care physicians surveyed, 84 percent said they routinely ask all adult patients if they use tobacco and 14 percent said they ask “some patients some of the time”. Responses were lower for adolescent patients (75 percent and 3 percent respectively).

**Data Source:** Ad hoc surveys comparable to Dr SmokeStopper.

### **Implementation Strategy:**

- Advocacy in cooperation with primary care professional organizations.
- Status surveys conducted in collaboration with Regional Prevention Centers in 2005 and 2009.

- 26.2. Achieve participation, by communities representing at least 80 counties, in comprehensive, science-based strategic planning, programming and evaluation for substance prevention, employing techniques developed through the Kentucky Prevention Evaluation and Planning System (KPEPS) and the Governor’s Kentucky Incentives for Prevention Project (KIP).**

**Target Setting Method:** Increase over 1999 baseline of 20 KIP projects representing 31 counties.

**Data Source:** Monitoring by Division of Substance Abuse.

**Implementation Strategy:** Inherent in Division operations and funding oversight.

**26.3. Achieve passage of legislation mandating Administrative License Revocation (ALR) or a program of equal effectiveness for people determined to drive under the influence of intoxicants, and a maximum legal blood alcohol concentration (BAC) level of 0.08 percent for motor vehicle drivers aged 21 and older.**

**Target Setting Method:** Based on *Healthy People 2010* objectives.

**Data Source:** NA

**Implementation Strategy:** Propose legislation to Kentucky General Assembly.

**26.4. Reduce the proportion of adolescents who report approval for use of tobacco, alcohol and other drugs to: tobacco 35 percent; alcohol 30 percent; marijuana 15 percent; other drugs 10 percent.**

**Target Setting Method:** Improvement over 1995 baseline in which the following percentages of 8th-grade students reported lack of opposition to use of substances: tobacco 57 percent; alcohol 47 percent; marijuana 29 percent; other drugs 22 percent (Partners in Rural Prevention survey).

**Data Source:** Governor's Kentucky Incentives for Prevention Project (KIP) and post-KIP community-level survey question(s) on personal approval/disapproval per substance.

**Implementation Strategy:**

- Translate this 2010 objective into annual fiscal year workplan activities for Regional Prevention Centers, community prevention coalitions and other entities funded or otherwise supported by the Division of Substance Abuse.
- Implement a sample survey that will accurately represent the status of substance involvement at the county/community level, will contain questions that permit comparison of Kentucky consistently with the most widely-referenced national surveys, will incorporate all appropriate core measures, and will respond to all applicable year 2010 objectives for Kentucky.

- 26.5. Increase the proportion of adolescents who perceive peer disapproval associated with use of substances (individually measured) to an *average* 75 percent among 8th graders and an average 85 percent among high school seniors.**

**Target Setting Method:** Improvement over 1995 baseline in which 8th-grade students perception of disapproval by friends was 43.9 percent for alcohol, 62 percent for marijuana, 80 percent for cocaine -- average 62 percent (Partners in Rural Prevention survey).

**Data Source:** KIP and post-KIP community-level survey question(s) on peers' approval/disapproval per substance.

**Implementation Strategy:** See Objective 26.4.

- 26.6 Increase to an average 95 percent the proportion of adolescents who perceive great risk of personal harm and/or trouble associated with use of tobacco, alcohol and drugs.**

**Target Setting Method:** Improvement over 1992 baseline in which 6-12th grade students perceiving danger in use of substances were alcohol 91 percent and illicit drugs 93 percent (Kentucky Drug and Alcohol Use Survey).

**Data Source:** KIP and post-KIP community-level survey question(s) on personal perception on risk of harm and trouble resulting from substance use.

**Implementation Strategy:** See objective 26.4.

- 26.7. Increase to the following percentages the number of school-age children who choose to abstain from use of tobacco, alcohol and other drugs: tobacco 50 percent; alcohol 50 percent; marijuana 80 percent; cocaine 96 percent.**

**Target Setting Method:** Improvement over 1997 baseline in which average numbers of students reporting abstinence were: tobacco 22.7 percent; alcohol 21 percent; marijuana 52.1 percent; cocaine 92 percent (Kentucky Youth Risk Behavior Survey).

**Data Source:** KIP and post-KIP community-level survey question(s) on personal abstinence per substance.

**Implementation Strategy:** See Objective 26.4.

- 26.8. Increase by at least one year the average age of first use of alcohol by adolescents.**

**Target Setting Method:** Improvement over 1997 baseline in which Kentucky adolescents reported their first drink of alcohol other than a few sips occurred at these ages: 8/under: 11 percent; 9-10: 6 percent; 11-12: 13 percent; 13-14: 29 percent; 15-16: 17 percent; 17/over: 2 percent (Kentucky Youth Risk Behavior Survey).

**Data Source:** KIP and post-KIP community-level survey question(s) on age of first drink of alcohol other than a few sips.

**Implementation Strategy:** See Objective 26.4.

**26.9. Increase by at least one year the average age of first use of marijuana by adolescents.**

**Target Setting Method:** Improvement over 1997 baseline in which Kentucky adolescents reported they first tried marijuana at these ages: 8/under:1.1 percent; 9-10:1.6 percent; 11-12:6.2 percent; 13-14:18.9 percent; 15-16:17.5 percent; 17/over:3.4 percent (Kentucky Youth Risk Behavior Survey).

**Data Source:** KIP and post-KIP community-level survey question(s) on age of first use of marijuana.

**Implementation Strategy:** See Objective 26.4.

**26.10 Increase by at least one year the average age of first use of illicit drugs (other than marijuana) or inhalants by adolescents.**

**Target Setting Method:** Improvement over 1997 baseline in which Kentucky adolescents reported they first tried cocaine at these ages: 8/under:0.5 percent; 9-10: 0.05 percent; 11-12: 0.05 percent; 13-14: 1.9 percent; 15-16: 4.3 percent; 17/over: 1.9 percent (Kentucky Youth Risk Behavior Survey).

**Data Source:** KIP and post-KIP community-level survey question(s) on age of first use of illicit drugs (other than marijuana) or inhalants.

**Implementation Strategy:** See Objective 26.4.

**26.11. Reduce past-month use of alcohol among adolescents to no more than 30 percent.**

**Target Setting Method:** Improvement over 1997 baseline in which 49.3 percent of Kentucky adolescents reported drinking alcoholic beverages within the past 30 days (Kentucky Youth Risk Behavior Survey).

**Data Source:** KIP and post-KIP community-level survey question(s) on past-month use of alcohol.

**Implementation Strategy:** See Objective 26.4.

**26.12. Reduce alcohol consumption in Kentucky to an annual average of no more than 2 gallons of ethanol per person.**

**Target Setting Method:** Improvement over 1994 national baseline of 2.21 gallons.

**Data Sources:** National Institute on Alcohol Abuse and Alcoholism; National Institutes of Health.

**Implementation Strategy:** To be determined.

**26.13. Reduce to no more than 10 percent the proportion of adolescents reporting marijuana use during the past 30 days.**

**Target Setting Method:** Improvement over 1997 baseline in which 28.4 percent of Kentucky adolescents reported using marijuana within the past 30 days (Kentucky Youth Risk Behavior Survey).

**Data Source:** KIP and post-KIP community-level survey question(s) on marijuana use during past 30 days.

**Implementation Strategy:** See Objective 26.4.

**26.14. Reduce to no more than 2 percent the proportion of adolescents reporting use of illicit drugs other than marijuana during the past 30 days**

**Target Setting Method:** Improvement over 1997 baseline in which 4.2 percent of Kentucky adolescents reported using cocaine within the past 30 days (Kentucky Youth Risk Behavior Survey).

**Data Source:** KIP and post-KIP community-level survey question(s) on use of illicit drugs other than marijuana during the past 30 days.

**Implementation Strategy:** See Objective 26.4.

**26.15. (Developmental) Reduce to no more than 12 percent the proportion of adolescents reporting inhalant use during the past 30 days.**

**Target Setting Method:** In 1997 Kentucky Youth Risk Behavior Survey, 26.5 percent of Kentucky adolescent males and 22.5 percent of adolescent females reported using inhalants *one or more times during their lifetime*.

**Potential Data Source:** KIP and post-KIP community-level survey question(s) on inhalant use during *past 30 days*.

**Implementation Strategy:** See Objective 26.4.

**26.16. (Developmental) Reduce to no more than 3 percent the proportion of adolescents reporting steroid use during the past 30 days.**

**Target Setting Method:** In 1997 Kentucky Youth Risk Behavior Surveillance, 7.2 percent of Kentucky adolescent males and 4.6 percent of adolescent females reported using steroids *one or more times during their lifetime*.

**Potential Data Source:** KIP and post-KIP community-level survey question(s) on steroid use during *past 30 days*.

**Implementation Strategy:** See Objective 26.4.

**26.17. Reduce to no more than 20 percent the proportion of adolescents age 12-17 who report binge drinking within the past month.**

**Target Setting Method:** Improvement over 1997 baseline in which 37.1 percent of students age 12-17 reported bingeing on alcohol in the past 30 days (Kentucky Youth Risk Behavior Surveillance).

**Data Source:** KIP and post-KIP community-level survey question(s) on binge drinking within the past month.

**Implementation Strategy:** See Objective 26.4.

**26.18. (Developmental) Reduce by one-fourth the proportion of Kentuckians of all ages who report binge drinking within the past month.**

**Target Setting Method:** In 1997 Kentucky Youth Risk Behavior Surveillance, 37 percent of students in grades 9-12 reported bingeing on one or more days in the past month.

**Potential Data Source:**

- KIP and post-KIP community-level survey question(s) on alcohol bingeing within the past two weeks
- BRFSS
- YTBSS

**Implementation Strategy:** See Objective 26.4.

**26.19 (Developmental) Reduce by half the proportion of persons who report having driven a vehicle, or riding with a driver who had been drinking, during the past month.**

**Target Setting Method:** *Developmental objective.* Improvement over 1997 baseline in which 16 percent of students age 12-17 reported driving after drinking, and 36 percent reported riding with a driver who had been drinking, during the past 30 days (Kentucky Youth Risk Behavior Surveillance).

**Potential Data Source:** KIP and post-KIP community-level survey question(s) on alcohol involvement while driving within the past month.

**Implementation Strategy:** See Objective 26.4.

**26.20. Reduce to less than 2 percent the proportion of adolescents age 12-17 who report using marijuana on three or more occasions within the past month.**

**Target Setting Method:** Improvement over 1997 baseline in which 4.9 percent of students age 12-17 reported using marijuana on 3 or more occasions in the past 30 days (Kentucky Youth Risk Behavior Surveillance).

**Data Source:** KIP and post-KIP community-level survey question(s) on use of marijuana within the past month.

**Implementation Strategy:** See Objective 26.4.

**26.21. (Developmental) Reduce by one-half the proportion of adolescents age 12-17 who report using any illicit drugs (other than marijuana), inhalants or steroids on two or more occasions within the past month.**

**Target Setting Method:** In the 1997 Kentucky Youth Risk Behavior Surveillance, average percentages of students reporting use of substances other than marijuana on one or more occasions during their lifetime were: other drugs=17.5 percent; drugs injected with needle 2.4 percent; inhalants=24.5 percent; and steroids=5.9 percent.

**Potential Data Source:** KIP and post-KIP community-level survey question(s) on use of illicit drugs (other than marijuana), inhalants or steroids within the past month.

**Implementation Strategy:** See Objective 26.4.

- 26.22. (Developmental) Reduce by half the proportion of persons who report having driven a vehicle after using drugs, or riding with a driver who had been using drugs, during the past month.**

**Target Setting Method:** In 1997 Kentucky Traffic Accident Facts, 533 drug related accidents were reported, involving 15 persons killed and 454 injured. In the 1997 Kentucky YRBSS, 16 percent of students age 12-17 reported driving after drinking, and 36 percent reported riding with a driver who had been drinking, during the past 30 days.

**Potential Data Source:** KIP and post-KIP community-level survey question(s) on drug involvement while driving within the past month.

**Implementation Strategy:** See Objective 26.4

- 26.23. Increase to 40 percent the percentage of persons who become and remain totally abstinent as a result of treatment for abuse of alcohol, drugs, or both in combination.**

**Target Setting Method:** Improvement over 1997 baseline in which 29.1 percent of Kentuckians receiving treatment for alcohol and/or drug abuse became and remained abstinent (Kentucky Substance Abuse Treatment Outcomes Study).

**Data Source:** Future iterations of Kentucky Substance Abuse Treatment Outcomes Study.

**Implementation Strategy:** To be determined.

- 26.24. (Developmental) Reduce by half the proportion of Kentucky adolescents who report involvement during the past year in physical fighting for reasons related to substance abuse.**

**Target Setting Method:** In 1997 Kentucky Youth Risk Behavioral Surveillance, 32.5 percent of students in grades 9-12 reported being involved in physical fighting, reason unspecified.

**Potential Data Source:** KIP and post-KIP community-level survey question(s) on involvement during the past year in physical fighting for reasons related to substances.

**Implementation Strategy:** See Objective 26.4.

- 26.25. (Developmental) Reduce by two-thirds the proportion of Kentucky adolescents who report non-sport weapon carrying during the past year for reasons related to substances.**

**Target Setting Method:** In 1997 Kentucky YRBSS, 26.4 percent of Kentucky students reported carrying a weapon (reason unspecified) on one or more of the past 30 days, compared to national average of 20.0 percent. Students carrying a weapon on school property (reason unspecified) compares even worse: Kentucky students 15.2 percent, national average 9.8 percent.

**Potential Data Source:** KIP and post-KIP community-level survey question(s) on non-sport weapon carrying during the past year for reasons related to substances.

**Implementation Strategy:** See Objective 26.4.

- 26.26. (Developmental) Reduce by half the proportion of Kentucky adolescents who report vandalizing, destroying or stealing property during the past year for reasons related to substances.**

**Target Setting Method:** In 1997 Kentucky Youth Risk Behavioral Surveillance, 30.4 percent of students reported that someone had stolen or deliberately damaged their property, reason unspecified, on school property during the past 12 months.

**Potential Data Source:** KIP and post-KIP community-level survey question(s) on vandalizing, destroying or stealing property during the past year for reasons related to substances.

**Implementation Strategy:** See Objective 26.4.

- 26.27. (Developmental) Reduce by half the proportion of Kentucky adolescents who report considering or attempting suicide during the past year for reasons related to substances.**

**Target Setting Method:** In the 1997 Kentucky YRBSS, the following percentages of students reported suicide involvements, reasons unspecified,

during the past 12 months: considered suicide = 12.3 percent; made a plan to commit suicide = 17.1 percent; actually attempted suicide = 8 percent; had to be treated by a doctor or nurse = 4 percent.

**Potential Data Source:** KIP and post-KIP community-level survey question(s) on considering, planning or attempting suicide during the past year for reasons related to substances.

**Implementation Strategy:** See Objective 26.4.

- Translate this 2010 objective into annual fiscal year workplan activities for Regional Prevention Centers, community prevention coalitions and other entities funded or otherwise supported by the Division of Substance Abuse.
- Implement a sample survey that will accurately represent the status of substance involvement at the county/community level, will contain questions that permit comparison of Kentucky consistently with the most widely-referenced national surveys, will incorporate all appropriate core measures, and will respond to all applicable year 2010 objectives for Kentucky.

**26.28. Reduce to the following levels the percentages of adolescents who report experiencing problems or trouble as a consequence of using alcohol or drugs:**

Trouble with family or friends:	12%
Trouble with police:	6%
Problems in school:	6%

**Target Setting Method:** Improvement over 1992 baseline in which percentages of 6-12th grade students reporting their use of alcohol or drugs caused them to have trouble or problems were: 17.5 percent trouble with family or friends; 9.1 percent trouble with police; 10.3 percent problems in school (Kentucky Drug and Alcohol Use Survey).

**Data Source:** KIP and post-KIP community-level survey question(s) on personal problems and trouble resulting from use of substances.

**Implementation Strategy:** See Objective 26.4.

## *References*

1. *Healthy People 2010 Objectives*, January 2000.
2. *Substance Abuse and Mental Health Statistics Sourcebook*, 1995. U.S. Substance Abuse and Mental Health Services Administration.
3. *National Survey of American Attitudes on Substance Abuse*. Center on Addiction and Substance Abuse at Columbia University, July 1995.

4. Cigarettes, Alcohol, Marijuana: Gateways to Illicit Drug Use. Center on Addiction and Substance Abuse at Columbia University, October 1994.
5. Teens and Tobacco; Facts Not Fiction. Centers for Disease Control, 1996.
6. Kentucky Youth Survey: Spring 1996, Tobacco Use Among Students In Kentucky. Center for Prevention Research, University of Kentucky, for Kentucky Division of Substance Abuse.
7. McGinnis, J.M. & Foege, W.H., Actual causes of death in the United States, Journal of the American Medical Association, 1993; 270:2207-2212.
8. Leach, R.C., Commissioner, Department for Health Services, Memo For Record: Notes on the costs of smoking attributable illness: Kentucky medicaid and U.S. general health expenditures; August 10, 1995.
9. Saving Lives and Raising Revenue: The Case for Major Increases in Federal and State Tobacco Taxes. Coalition on Smoking OR Health, February 1995.
10. Kentucky Annual Vital Statistics Reports -- 1989 to 1995. Kentucky State Center for Health Statistics.
11. Kentucky UB-92 Hospital Information Database, 1995, special query March 1997; Department of Public Health.
12. Kentucky Traffic Accident Facts, 1995 Report. Kentucky State Police.
13. Crime In Kentucky, 1995 Crime Report, Kentucky State Police.
14. Dr SmokeStopper, Report on a Public Health Collaboration, 1999, Kentucky Medical Association and Division of Substance Abuse.
15. Partners in Rural Prevention survey, 1996, Community Systems Research Institute, Inc.
16. Kentucky Alcohol and Drug Use Survey, 1992, Kentucky State University.
17. Kentucky Youth Risk Behavior Survey, 1997, Kentucky Department of Education and Centers for Disease Control.
18. Kentucky Traffic Accident Facts, 1997 Report. Kentucky State Police.
19. Kentucky Substance Abuse Treatment Outcomes Study, 1999, University of Kentucky Center for Drug and Alcohol Research for Kentucky Division of Substance Abuse.

## ***Contributors***

- Don Coffey, Prevention and Training Branch, Division of Substance Abuse, Department of Mental Health and Mental Retardation, Chapter Coordinator
- Barbara Stewart, Manager, Prevention and Training Branch, Division of Substance Abuse
- Mike Townsend, Director, Division of Substance Abuse
- Ted Godlaski, UK Center on Alcohol and Drug Research
- Dr. Carl Leukefeld, Director, UK Center on Alcohol and Drug Research
- Steve Pace, Division of Substance Abuse
- Hugh Spalding, Division of Substance Abuse

- Todd Warnick, Tobacco Control Officer, Department for Public Health