



Virginia Family Impact Seminars

**Substance Abuse Prevention:
Policies, Programs and Strategies
for Virginia's Youth
Briefing Book**

September 23, 2009
The Capitol, Senate Room 3

**Center for Public Policy
Virginia Commonwealth University
Richmond, Virginia 23284**

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Acknowledgments

This seminar is funded by the **Governor's Office for Substance Prevention** (GOSAP), in collaboration with the VCU School of Education Center for School-Community Collaboration with funding from GOSAP with the Governor's portion of funds from the United States Safe and Drug-Free Schools and Communities Act of 2001, Title IV, part A of the No Child Left Behind Act of 2001. The Catalog of Federal Domestic Assistance number is 84-186.

The **VCU Center for Public Policy** is a multidisciplinary policy studies organization serving Virginia Commonwealth University and its surrounding communities. We are proud to sponsor the Virginia Family Impact Seminar.

Located on the Monroe Park Campus of VCU, our Center is housed within the L. Douglas Wilder School of Government and Public Affairs and is part of the University's College of Humanities and Sciences. Our Center was established on July 1, 1994 as an initiative of a "Strategic Plan for the Future of Virginia Commonwealth University", with the goal of focusing the university's multidisciplinary efforts in public policy.

As a comprehensive, university-wide center, the Center for Public Policy has responsibilities in each area of the University's broader missions: teaching, research, and public service. The Center houses and administers the Ph.D in Public Policy and Administration. In addition, our staff members conduct basic and applied research on a number of public policy matters, with special attention to health policy, urban and metropolitan development, and state and local government and politics. The Center for Public Policy is also home to the Commonwealth Poll, a regular survey of Virginians' attitudes about politics and policy. Beyond these contributions, the Center also engages in significant service through its training programs, conferences, publications and other contributions to public discourse.

We also wish to thank...

Karen Bogenschneider, Director, and her colleagues at the **Policy Institute for Family Impact Seminars**, University of Wisconsin, Madison Wisconsin.

Amy M. Atkinson, Executive Director, and her colleagues at the **Commission on Youth** for their support and assistance with this year's VAFIS Seminar.

Statement of Purpose and Focus

The purpose of the Virginia Family Impact Seminars (VAFIS) is to share objective, nonpartisan, solution-based research on topics of current concern to state policymakers. Families are perhaps the most important aspect of life for most Americans. Family Impact Seminars encourage policymakers to consider the impact of policies on families much the same as they examine the impact of economic and environmental policies and practices.

Seminar topics, which are focused on policies and practice solutions that have an impact on children and families, are identified by legislators and legislative staff each year and are based on their concerns and insights of what family related issues are likely to be addressed during up-coming legislative sessions. VAFIS conducts annual seminars, prepares briefing reports, and conducts periodic follow-up activities designed specifically for state legislators and legislative staff, the Governor and executive branch staff, and state agency representatives.

Through VAFIS, research, information and insight related to policy, practice and programs are presented by

- Nationally regarded experts who participate in panel discussions at seminars with legislators and
- Written briefing reports that highlight the most essential information on seminar topic.

VAFIS also opens the door for ongoing exchanges between legislators, experts who speak at the Seminars, researchers, VAFIS faculty members, and a broad range of stakeholders concerned about the issue, including members of the executive branch, directors of state and local government agencies, leaders of nonprofit agencies, and researchers and scholars from Virginia Commonwealth University and other institutions of higher education. The briefing report is disseminated to this broad audience and is posted on the VAFIS web site: <http://www.pubapps.vcu.edu/gov/vfis/main.html>.

VAFIS suggests that the first step in developing family-centered policy is asking the right questions. For example,

- What can government and community institutions do to enhance family members' capacities to help themselves and their families?
- In what ways will a policy affect the family: will it strengthen or weaken family life?

Focus on Youth Substance Abuse

The abuse of various substances that are both legally and illegally obtained has received considerable attention by policy makers and researchers over the years; however, substance abuse and the often tragic effects it has on the individual, the family, and the broader community continues.

Efforts to understand the reasons for substance abuse, and its social and financial impact on citizens of the State, are being made. Three recent studies report on the epidemiology (GOSAP), the financial impact (JLARC) and prevalence (Substance Abuse Services Council) of substance abuse across the population of Virginia. Comparisons can be made to national studies conducted principally by the Substance Abuse and Mental Health Services Administration, Department of Health and Human Services (SAMHSA/DHHS).

However, data is also available from organizations and agencies concerned with law enforcement and public safety, as well as departments of education, and individual researchers in universities worldwide. The data is plentiful; however, the problem remains: How is it possible to prevent substance abuse and its deleterious effects on society, particularly among the nation's youth?

This briefing book includes selected information with citations, specifically on youth, from the most recent state and federal studies. We draw on these studies for key information as context for our speakers' papers. This briefing book is not meant to be inclusive. The amount of information on this problem is simply too vast to summarize. The authors encourage readers to seek out and read the original reports for their broader contributions to problem-solving.

Points to Consider

We begin with information made available by the federal government which has numerous resource documents and evidence-based program descriptions, followed by a summary of studies and resources in Virginia.

A March 2008 report on “Substance Use and Dependence Following Initiation of Alcohol or Illicit Drug Use (p.20)” states the following:

- In 2007, nationally, 9.5 percent of youths aged 12 to 17 were current illicit drug users: 6.7 percent used marijuana, 3.3 percent engaged in nonmedical use of prescription-type psychotherapeutics, 1.2 percent used inhalants, 0.7 percent used hallucinogens, and 0.4 percent used cocaine.
- Among youths aged 12 to 17, the types of drugs used in the past month varied by age group:
 - Among 12 or 13 year olds, 1.4 percent used prescription-type drugs nonmedically, 1.1 percent used inhalants, and 0.9 percent used marijuana.
 - Among 14 or 15 year olds, marijuana was the most commonly used drug (5.7 percent), followed by prescription-type drugs used nonmedically (3.4 percent), and then inhalants (1.4 percent).

A 2007 Fact Sheet produced by the National Institutes of Health on underage drinking includes the following information:

- A 2005 study reported an estimated 11 million underage drinkers in the U.S. Forty-one percent of current 8th graders, 63 percent of 10th graders, 75 percent of 12th graders, and 87 percent of college students have tried alcohol.
- There is a high prevalence of binge drinking—the consumption of five or more drinks for males and 4 or more drinks for females per occasion. Underage drinkers consume, on average, 4 to 5 drinks per occasion about five times a month. By comparison, drinkers age 26 and older consume 2 to 3 drinks per occasion, about nine times a month.
- Underage drinking is a leading contributor to death from injuries, which are the main cause of death for people under age 21. Each year, approximately

5,000 persons under the age of 21 die from causes related to underage drinking. These deaths include about 1,600 homicides and 300 suicides.

- Alcohol also plays a significant role in risky sexual behavior and increases the risk of physical and sexual assault.
- Underage drinking is also associated with future alcohol dependence. Analyses of data from the National Epidemiologic Survey on Alcohol and Related Conditions show that people who begin drinking before age 15 are four times more likely to develop alcohol dependence during their lifetime than those who began drinking at age 21 or later.

In Virginia, three studies, mentioned above, have been produced in the last few years. One of them, produced by the Joint Audit and Legislative Research Commission (JLARC) 2008 report opens with these summary words:

House Joint Resolution 683 and Senate Joint Resolution 395 from the 2007 General Assembly directed JLARC staff to study the impact of substance abuse on the State and localities. JLARC staff found that the adverse effects of substance abuse cost the State and local governments at least \$613 million in 2006, incurred primarily in public safety. To mitigate these effects, the State and localities spent \$102 million providing substance abuse services.

Most populations that completed substance abuse treatment imposed lower net costs on the State and localities, and the majority experienced better outcomes. Still, the benefits of substance abuse treatment are not maximized because many Virginians do not seek services, are unable to access them, or do not receive services that are proven effective and best meet their needs. In addition, the majority of offenders do not appear to receive the substance abuse treatment they need despite imposing the greatest costs. To further reduce the costs of drug and alcohol abuse, the State could ensure that existing services are effective, and then consider expanding the availability of substance abuse services (*JLARC, Introduction, House Document No. 18, 2008.*)

The following excerpts are taken from “An Epidemiological Profile: Substance Abuse in the Commonwealth of Virginia pp 27-33,” available at the following URL: <http://www.gosap.governor.virginia.gov/pdf/08annualreport.pdf> (Accessed 8/10/09)

Statistics compiled from federal and state sources provide the following information:

Lifetime youth inhalant use. Reported lifetime use for 8th and 10th graders declined from 2003, and their 2005 rates approximate the national level (17.1%, 11.4%). Of greatest concern however, is the trend suggested by considering both 30-day and lifetime use together. If the overall prevalence of lifetime use is similar to the national level and for 8th and 12th graders is declining, but the current incidence of use is two to three times the national level, and is increasing, it would appear that youth who have used inhalants are continuing use over time. The pattern of declining use as youth move to higher grade levels does not seem to be occurring in Virginia to the extent that it does nationally.

1 in 6 Virginia 8th graders report inhalant use within the past 30 days

1 in 7 Virginia 10th graders report inhalant use within the past 30 days

1 in 9 Virginia 12th graders report inhalant use within the past 30 days

Trends in youth alcohol use. Overall, the trend in alcohol use among Virginia's 8th, 10th and 12th grade youth is *down*.

- The percent of youth who report using alcohol is decreasing (18.9%, 34.5%, 45.8%), though it still is slightly above the national rates for 8th and 10th graders (17.1%, 33.2%)
- The percent of youth who have ever used alcohol is decreasing (41.7%, 63.6%, 75.8%).
- The age at first use is increasing (average initiation age: 13.2 years).
- The percent of youth who report binge drinking is decreasing (8.7%), and is below the national rate (10.5%).
- The percent of youth who report recent heavy drinking is decreasing (7.4%, 16.3%, 25.9%).

Despite these positive trends, by 12th grade, over 75% of Virginia's youth report that they have used alcohol.

1 in 5 Virginia 8th graders report alcohol use within the past 30 days.

1 in 3 Virginia 10th graders report alcohol use within the past 30 days.

1 in 2 Virginia 12th graders report alcohol use within the past 30 days.

Trends in youth methamphetamine use. Methamphetamine use among Virginia's 12th graders has declined to two percent from a high point of 3.2 percent. Still, this is more than twice the national rate of less than one percent.

- Virginia's methamphetamine rate for 10th graders has increased to a high point of 2.3 percent. This is more than twice the national rate of 1.1 percent.
- The rate of 8th grade methamphetamine use for Virginia is fairly stable at one-half percent. This is just over half the national 8th grade rate of .9 percent.

Trends in youth cocaine use. The percentage of Virginia's 8th graders who report cocaine or crack use within the past 30 days has remained stable at 1.2 percent. This is very similar to the national rate for 8th grade cocaine use (1.0%). Use among 10th graders has increased to 2.5%, higher than the national rate of 1.5%. Likewise, Virginia's 3.0% rate for 12th graders is higher than the national rate of 2.3%.

It should be noted that Virginia's data is based on a question that includes both cocaine *and* crack use, while the national numbers inquire about cocaine and crack separately. National rates for cocaine are much higher than those for crack. The national data shown for comparison are for the higher cocaine use numbers. A national survey of 12 to 17 year olds that inquired about cocaine use in the past year shows Virginia's rate to be slightly lower than the national rate.

Trends in youth other illicit drug use. Questions on the use of painkillers and stimulants are new to Virginia's Community Youth Survey. Consequently only 2005 data are available. Still it is informative to see the relative use patterns between the three classes of drugs. As seen in other types of drug use, 10th grade is a critical period, with 8th grade use lower than other grade levels.

Questions on heroin have been included in prior surveys and national comparison data also are available. Virginia's 10th and 12th grade rates for heroin use (1.7% and 1.3%) are considerably higher than the national rate of .05% for 8th, 10th, and 12th graders. Still this constitutes only a very small number of youth.

Trends in youth marijuana use. The percent of Virginia 8th graders who report current marijuana use more than doubled from 2000 (6.5%) to 2005 (14.6%). This exceeds the percent of 8th graders who report ever using marijuana (12.2%). Further, the age of many 8th graders would be lower than the average initiation age of 14.0 years. Additionally, Virginia's rate is more than double the national 8th grade rate for current use (6.6%), which has been declining. In fact, Virginia's current use rate is much closer to the national lifetime use rate for 8th graders of 16.5 percent. Hence, while the national trend is for many 8th graders to try and discontinue marijuana use, there either was a surge in the number of Virginia's youth trying marijuana within the 30 days prior to the survey being administered, or they are trying and continuing use.

Also contrary to the national decreasing trend and current use rate of 15.2 percent, Virginia's current use rate for 10th graders continued its upward trend to 20 percent. While the 10th grade national lifetime use rate (34.1%) exceeds Virginia's (28.3%), less than half of 10th graders nationally who have ever used marijuana are current users. Over two-thirds of Virginia's 10th graders who have ever used marijuana are current users.

While the national and Virginia lifetime use rates for 12th graders are similar (44.8% and 43.8%), Virginia's 12th grade current use rate dropped by more than half from 2003 (27.5%) to 2005 (13.0%). During the same period the national rate continued its slight decline from 21.2 percent to 19.8 percent.

1 in 7 Virginia 8th graders report marijuana use within the past 30 days

1 in 5 Virginia 10th graders report marijuana use within the past 30 days

1 in 8 Virginia 12th graders report marijuana use within the past 30 days

Important Links to websites that feature programs and studies:

National Registry of Evidence-Based Programs and Practice
<http://nrepp.samhsa.gov/find.asp>

Office of Safe and Drug Free Schools
<http://www.ed.gov/about/offices/list/osdfs/index.html?src=mr>

Leadership to Keep Children Alcohol Free
<http://www.alcoholfreechildren.org/>

National Youth Violence Prevention Center
<http://www.safeyouth.org/scripts/facts/substance.asp>

Draft Logic Model for **Youth Substance Use and Abuse Prevention** Programs in OAS Member States.
www.cicad.oas.org/Reduccion_Demanda/eng/DRresources/experts/Experts

National Survey on Youth Substance Abuse
<http://oas.samhsa.gov/nsduh.htm>

Results from the 2007 National Survey on Drug Use and Health:
National Findings <http://oas.samhsa.gov/nsduh/2k7nsduh/2k7Results.pdf>

Brief Number One:

Youth Problems Can Be Prevented

Anthony Biglan, Oregon Research Institute

Youth Problem Behaviors

The most common and costly problems of human behavior include aggressive social behavior, risky sexual behavior, depression, substance abuse, academic failure, school dropout, and crime. Each of these problems affects millions of people and causes pain and suffering both to the person with the problem and those around them.

Problem behaviors do not exist in a vacuum: youth with one problem are also likely to have others (Biglan et al., 2004). For example, data obtained from the Oregon Healthy Teens survey (Boles, Biglan, & Smolkowski, 2006) indicates that, among the 9% of Oregon eighth graders who reported smoking, 95% reported at least one other problem. Among the 9% of Oregon eighth graders reporting antisocial behavior, 86% reported at least one other problem.

Although fewer than 20% of youth have multiple problems, that group of youth accounts for over 75% of drunk driving, violent crime, total arrests, and health problems associated with drug or alcohol use and improper needle use. If we do nothing to halt development of these problems or treat them more effectively when they do occur, we will continue to incur enormous costs. If we fail to ensure that at-risk youth receive appropriate prevention and treatment for family, mental health, or substance use problems, then they will struggle academically, drop out of school, get into trouble with the law, and enter the corrections or child welfare system, incurring huge financial and human costs in the process.

The Cost of Youth Problem Behaviors

The cost of these behaviors is substantial. While youth suffer with depression, pain, rejection, injury, and even death, their family members experience conflict, sadness, and anxiety. Crime victims undergo harm, sometimes grievously. In 2004, economist Ted Miller calculated the costs of problem behaviors occurring in 1998 by all youth. He included violent crime, property crime related to substance abuse or violence, binge drinking, heroin/cocaine abuse, high-risk sexual behavior, smoking, high school dropouts, and suicide attempts (Miller, 2004). He included the cost of medical treatment, use of government and community resources, loss of work, and decline in quality of life. With one exception (smoking), Miller also included the costs that would continue beyond 1998 due to that problem behavior. For example, an assault that left a victim paralyzed would result in continuing costs throughout that victim's life. Even without including the long-term cost of smoking, Miller's estimate came to \$435.3 billion.

The mental, emotional, and behavioral disorders leading to these multiple problems begin early: 75% of adult disorders start by age 24; half of them by age 14. The first symptoms usually start to emerge two-to-four years before a diagnosable disorder does. Currently, 14 to 20% of young people have a disorder that can lead to these expensive problems.

Prevention through the Life Span

The good news is that these serious multiple problems are preventable. Most problems have common risk factors. Three of the most prominent risk factors are stress, poverty, and family conflict. Research has shown that at every phase of young people's development—from conception through adolescence—there are interventions that can prevent the development of these costly problems.

For example, when a woman becomes pregnant and through the first few years of her child's life, available programs include pregnancy education and prevention, prenatal care, nurse home visitation, early childhood interventions, and parenting skills training. Effective parenting programs exist for parents with children of all ages. Additionally, as children reach school age, they can receive social and behavioral skills training and classroom-based curricula to prevent substance abuse and aggressive behavior. From early adolescence through young adulthood, young people can benefit from programs to help prevent and/or cope with depression. Intensive programs exist for those who are facing the onset of schizophrenia. Prevention focused on specific family adversities (e.g., grief, divorce, parental substance use or incarceration, or parental psychopathology) is available to help young people at all stages of development. Finally, policies exist to help children and families at each developmental stage. For example, there is clear evidence that raising the cost of tobacco and alcohol reduces the number of young people who smoke or drink.

Most evidence-based preventive interventions prevent a range of problems. We describe just a few of those here.

Examples for Families

Nurse Family Partnership offers nurse visitation with mothers during pregnancy and the first two years of their children's lives. The focus is on prenatal care, maternal smoking, mothering, contraception, and work life. Evaluations in three randomized trials for poor, teenager single mothers found significant effects on abuse and neglect, children's behavioral development, mother's economic wellbeing, the time to next baby, and children's arrest as adolescents (Olds et al., 2004).

Triple P (Prinz, Sanders, Shapiro, Whitaker, & Lutzker, 2009) is a community-wide system of parenting support that includes brief media communications, brief advice for specific problems, and extensive interventions when needed. Multiple randomized trials have shown benefit, including a randomized controlled trial in 18 South Carolina counties, where Triple P stopped a rising trend of substantiated child-maltreatment among the counties using Triple P, compared to counties that did not receive it.

Strengthening Families (Spoth, Redmond, & Shin, 2001) is a group-based parenting program for parents of early adolescents that produced benefits up to six years later. It reduced tobacco, alcohol, and drug use—including methamphetamine use and reduced delinquency. In a cost-effectiveness survey, Aos, Lieb, Mayfield, Miller, and Pennucci (2004) noted the program produced a savings of \$7.82 for each dollar invested and a total savings of \$5,805 per youth.

The **Family Check-Up** (Dishion et al., 2008) provides parenting support to families of adolescents via a family resource center in middle schools. Effects as much as five years later include reduced substance use, fewer arrests, better school attendance, and academic

performance. In their cost-effectiveness review, Aos et al. (2004) found a savings of \$5.02 per dollar invested and a total savings of \$1,938 per youth.

New Beginnings is a small group program for divorcing families, with emphases on learning new skills and applying them in the family. It has shown numerous benefits for families. For example, children in families that received New Beginnings were less likely to use marijuana compared to the control group (Wolchik et al., 2009).

Depression prevention. Clarke et al. (2001) found that a group program for adolescent offspring of depressed parents could reduce the incidence of depression to a level no higher than for adolescents whose parents were not depressed.

Multidimensional Treatment Foster Care (MTFC) places court-ordered youth in homes of foster parents well trained in behavior management and continuously supported by program staff (Chamberlain, 2003). The young people's parents receive the same behavior management training and support from staff. The program's key features include daily monitoring of the youth's behavior and consistent consequences, even for minor infractions. When ready, the adolescent makes a gradual return home. Randomized controlled trials show that the program results in fewer arrests, less crime, and less delinquent behavior. MTFC also has shown clear economic benefits in reducing incarceration and crime victim costs: Compared with typical community placements, MTFC has shown savings of \$10.88 for each dollar spent, for a total savings of \$24,290 per youth.

Examples for Schools

The **Good Behavior Game** (Kellam et al., 2008) rewards teams of students for brief periods of on-task, cooperative behavior. The rewards are as simple as a little extra recess time. The game dramatically increases children's cooperation and concentration. Shep Kellam and his colleagues at Johns Hopkins University used the game in first grade classrooms in Baltimore inner-city schools. In their randomized controlled trial where some classrooms got the game and others did not, they found that those who got the game abused drugs less, committed fewer crimes, and were less likely to be depressed when they were adults. A little reinforcement for prosocial behavior in first grade changed the entire life trajectory of some of these children.

Aban Aya is a school and community intervention for high-poverty African American neighborhoods in Chicago (Segawa, Ngwe, Li, & Flay, 2005). The intervention included social skills training; in-service training of school staff; a task force to develop policies, conduct schoolwide fairs, seek funds for the school, and conduct field trips; and parent training workshops. The program brought about significant effects on violence, drug use, and boys' recent sexual intercourse.

The Need for Nurturing Families, Schools, Neighborhoods, and Workplaces

The interventions described here represent only a few of the advances that behavioral sciences have made in the past 40 years. Behavioral and biological scientists have studied all of the most common and costly problems of human beings. They have made great advances in the treatment and prevention of psychological problems like depression and anxiety; behavioral problems like antisocial behavior, substance abuse, marital conflict, and child abuse; and physical illnesses, like obesity, cardiovascular disease, diabetes, and cancer.

The evidence from all of these areas converges on a surprisingly simple conclusion. We can prevent an enormous proportion of the problems that confront us by increasing the prevalence of nurturing environments (Biglan & Hinds, 2009). Nurturing environments minimize biological and psychological toxins or stressors, richly reinforce prosocial behavior, teach prosocial values and skills, and foster psychological flexibility.

Stressful and biologically toxic conditions can make it impossible for people to thrive. Biologically harmful conditions include high levels of lead (Glenn & Biglan, under preparation), low levels of omega 3 fatty acid, and inadequate nutrition. They affect young people's cognitive and physical development and make academic failure, aggression, depression, and substance use more likely. Too many children and adults encounter psychologically stressful conditions such as threats, physical and sexual abuse, conflict, and criticism. Recent research on neuroscience makes clear that such psychological stressors harm people's biological functioning. For example, economic disparities are associated with a greater risk of cardiovascular disease. Such stressors increase the likelihood that young people will develop problems with aggression, depression, and drug use. Our public policies and programs need to make our nation's highest priority the reduction of stressful and toxic conditions in families, schools, workplaces, and neighborhoods.

Richly reinforce prosocial behavior. Forty years of behavioral science research show that positive reinforcement is essential for human wellbeing. Every effective prevention or treatment intervention involves the interventionist reinforcing people's change efforts, and every effective parenting or school-based program increases positive reinforcement for prosocial behavior. Parents learn to use simple rewards, like stickers, praise, or simply time spent with their children to help children learn virtually everything they need to learn—dressing themselves, doing homework or chores, cooperating with others, and much more.

If positive reinforcement sounds dry and technical, the word love is a pretty good approximation of what we are discussing. Not a love that flows from feeling good about the other person—as in a romance—but a love that involves caring for, supporting, and listening to another person even when it takes some effort—more like the love a mother shows an infant. Our communities will become more nurturing when they encourage everyone to adopt this caring and supportive stance when dealing with everyone they encounter.

Teach and promote prosocial behavior. Effective prevention and treatment interventions help people develop more prosocial behavior. Once we realize the benefits of promoting prosocial behavior, we can begin to think about the ways that our environments do and do not encourage such behavior. A steady diet of violent entertainment increases aggressive behavior (Huesmann, Eron, Klein, Brice, & Fischer, 1983). Teaching children ways to deal with conflict nonviolently reduces aggressive behavior (e.g., Cooke et al., 2007).

Beyond the programs and practices that promote prosocial behavior, as a general rule we should seek to encourage policymakers, parents, and citizens to determine ways to promote prosocial behavior. Do our schools actively promote such behavior? Do they promote volunteering? Can we teach people to forgive others rather than carry grudges that prolong conflict? Are models of prosocial behavior widely available in families, schools, and media? Do these models receive the recognition needed to encourage others to be prosocial?

Psychological flexibility. Nurturing environments foster psychological flexibility. Psychologically flexible people do not attach rigidly to their beliefs and thus can adjust flexibly to the demands of the situation. Because they are not fused to their beliefs, they are

more tolerant of others. They are clear about their own values and act in the service of those values, even when doing so feels difficult or frustrating. They tend not to criticize or complain about other people's behavior. Because they are less judgmental, they are less likely to punish or hurt others and more likely to praise, support, attend to, and care for others.

Recent work in mindfulness therapies, such as Acceptance and Commitment Therapy (Hayes, Strosahl, & Wilson, 1999), shows that when people receive help with adopting this type of acceptance, they become more flexible in making their way in the world. Rather than focusing on feeling good, they focus on acting in the service of their values. Research shows the benefit of this approach to life for people with all kinds of problems, including anxiety, depression, diabetes, cigarette smoking, hallucinations, and even epilepsy.

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Brief Number Two: Connecting and Supporting Families to Prevent Youth Drug Abuse

Patrick H. Tolan Ph.D., University of Virginia

Applying Sound Information and Techniques Can Make the Difference

Adolescence is a time of exploration, of trying-on ideas, values, and identities. This serves the important personal and social function of assuring internal purpose and societal connection in adulthood. It is also a time when one explores the trappings of adulthood and a time of great susceptibility to risk taking and substance use. Thus, adolescence is the time when one sees the initiation of many problems such as cigarette and tobacco use, alcohol consumption, and use of illegal and misuse of legal drugs.

These problems lead to great costs for the individuals that get caught up in habitual use or harm from behavior while intoxicated, but also to those who incidentally hurt others, miss school, or fail at achieving and fulfilling their potential. As estimated by the Virginia Joint Legislative and Audit Committee this problem costs this state \$613 million per year (JLARC, June 2009). This is comprised of much spend on additional services, criminal justice procedures, and does not consider the lost wages and productivity of the youth and their families. Unaddressed adolescent drug abuse degrades the social fabric of our society that is vital for a vibrant democracy and civil society.

It is no longer plausible to consider whether these problems are important enough to warrant our attention and funding. We know drugs affect all of our communities; the question is what is to be done and what is the wisest investment. Currently, most funds are obligated to legal prosecuting and incarceration related to drug use. But as shown by Steve Aos and his group at the Washington State Institute for Public the se are poorly spent dollars. Prevention can return between \$2 and \$14 per dollar invested. (Aos, Lieb, Mayfield, Miller, & Pennucci, 2004). A portion of what is obligated by prison building and maintaining can easily cover prevention costs.

How can these attractive savings and related benefits be realized? By use of scientifically tested programs that support families, connect youth to schools and social programs, and that reinforce behavior that is counter to drug use and that delays experimentation. Effective programs provide a reconnection of youth and families to the schools and neighborhood social fabric (Califano, 2007). There is a cadre of effective methods that can be helpful depending on the age of the youth to be affected and the community needs (Tolan, Szapocznik, & Sambrano, 2007).

By applying a developmental perspective, using sound information gathering, and organizing to apply tested programs that fit the communities need, we can reduce the number of youth with serious drug problems, the prevalence of these substances in the social life of adolescents, and regain the lost potential they sap from our youth. At the same time with state incentives and funding approaches that support such efforts, communities and the state budget can reap dividends that far exceed results of waiting till problems develop to treat or to incarcerate.

Adolescence and Prevention: Locating Your Community in the Terrain

At age 14 only a small proportion of youth have tried tobacco, alcohol, or other substances. By age 18 or graduation of high school, almost all will have tried alcohol, a substantial minority (in some communities a majority) will have tried cigarettes or some other form of tobacco, and almost one in two will have tried marijuana, misused prescription drugs, or tried other illegal substances.

The good news is most will not engage in habitual use. However, some will. Most of those that engage in serious use start earlier and often do so through involvement with older already using peers.

What can be misleading is to suppose these patterns mean most adolescents are not harmed by their use or will not fall into habitual use. This is not the case; whether evidenced as a tragic auto accident that claims the life of one or more or the cumulative effect on motivation for achievement and engagement in societal responsibilities. As a large group the overall impact of some use on development, health care, education and criminal justice costs are substantial. Thus, while a small portion of youth show the type of serious and continuous use that leads to repeated problems in multiple areas, the costs associated with the aggregate of “low-risk” youth competes in costs and lost human capital.

While most funding, most costs, and most organization of fund distribution for drug prevention and other interventions occur at the state level, most prevention and the most effective prevention are at the community level. A key challenge is to help communities recognize the problems and implement approaches that can work, to incentivize good use of the funds. All communities have adolescent substance use problems. The question of how prevalent, what types of use are common, and how that is concentrated in a small portion of youth versus spread across the general population are the questions that are important and unfortunately are often uncertain (Glantz & Leshner, 2000). Communities need to understand where in the terrain they are located as that can tell them what they can and should do.

We know that communities vary substantially in youth drug use patterns including:

- Overall Rates of Use
- Types of Substances Most Commonly Used
- Age of Typical Starting
- Which Substance is Commonly First Used (what is gateway drug)
- How Substance Use is Linked to Other Problems Such as Delinquency, Violence, Gang

We know that adolescent youth is predicted by similar risk factors across communities (Hawkins, Catalano, & Arthur, 2002). However we know that communities vary substantially in:

- Which risk factors are present
- How many (cumulative stress) are present typically for youth

- How important family versus peer influences can be
- The resources available already that can be used to build protection and reduce risk

We know of programs or approaches that make a difference in whether youth start early, engage seriously, and continue with increasing drug use and misuse. We have well-tested programs that can make a difference if:

- Are selected to affect the problem pattern affecting that community
- Are Implemented as designed
- Have adequate training and support for operations built into management
- Are coordinated as part of community effort
- Focusing Prevention: Lessons from Scientific Studies

There are many opportunities for effective drug prevention. Some focus on helping high-risk youth avoid further entanglement with other high risk youth while others help promote values and beliefs about not using substances. Many focus on helping families and schools watch over or track adolescents better and reinforce positive behaviors. Others work on connecting parents to resources and to other parents. However, each of these is designed as one strategy as part of an overall set of efforts as there are different needs among youth within a given community and across communities (Dishion, Shaw, Connell, Gardner, Weaver & Wilson, 2008).

Coordinating to Apply Effective Programs Is Needed. A key stumbling point for many communities is how funds and responsibilities to work on drug prevention should be managed. Many do not use empirically tested programs and many use them in name only. There is much money being spent poorly and much effort that is unlikely to make any difference.

There is scientific evidence for a couple of approaches to coordinating that warrant use. While not the only or the perfect solutions, these approaches have been tested and shown to be effective for organizing prevention efforts. One is called Communities that Care (Hawkins et al., 2002; <http://ncadi.samhsa.gov/features/ctc/resources.aspx>). The other is called PROSPER (Spoth, Greenburg, & Turrisi, in press; <http://www.prosper.ppsi.iastate.edu/default.htm>).

Both:

- Use local information and conduct surveys to understand the problems, strengths, and needs of specific community
- Structure the relationship between this information and program choice
- Connect the community to technical assistance and expertise to select effective programs and implement these correctly (so prevention can work)

PROSPER is University-School System Partnership to organize school-based family-focused intervention to support parenting and family communication while promoting non-use norms and values in the school.

Communities that Care applies a framework to bring civic, health, criminal justice, education, and family welfare sectors to the table to learn about what are community strengths and problems and to select, implement, and support empirically proven programs that can make a difference. Clear benchmarks for effective organization and progress help to identify appropriate program choices.

Both change the information quality and the reliance on sound information in planning, resource use, and decision-making

Both were sustained by communities after initial set up period,

Both reduce drug use and related problems such as delinquency.

One Example of How Prevention Works:

SAFE Children is a family-focused program designed for families residing in high-risk (high poverty, high crime rate) communities. Some prevention efforts target skill building or changing behavior directly to reinforce behavior that is counter to drug use. Our goal was to help families in these high-risk communities be able to raise their children safely and to work with schools in helping them achieve the hopes and dreams they had as their children enter first grade.

From prior work we knew families in these communities were more isolated from extended family and neighbors than in most communities. In addition to being in more challenging communities they were missing the support and extra help most of us have in raising children; whether that is information and guidance from a prior generation, ideas and shared overseeing of children with neighbors, or the opportunity to hear that what you struggle with is normal and that you can help others. We also knew that in small groups of families with children of similar age and living in the same community there were natural connections and shared interests (Gorman-Smith, Tolan, Henry, Qunitana, Lutovsky, & Leventhal, 2007 summarizes details).

We set up small family groups of parents with children entering first grade to share information and support, review and learn about more effective parenting methods, increase understanding of schooling and how parent involvement helps, and help with real problems of day-to-day life in parenting they were facing. These were not chat sessions, but structured discussions and practice of skills and approaches following a manual. At the same time, children in the program were tutored 20 minutes twice a week in basic reading. This was because we basic reading skills are the foundation to progress in academics and also where children in high-risk communities often fall behind others.

Families reported they enjoyed the groups and we heard of many friendships forming among members. However, we know many times participants will report they enjoy and even found helpful programs that make no real difference in their behavior or their child's risk. So we carefully measured how the parents and their child were doing after the program. We (Tolan,

Gorman-Smith, & Henry, 2004) found some important effects, measured one year after we stopped the program:

Students in SAFEChildren were reading at the national average while those sitting next to them but not in the program were falling behind; three quarters of a year behind the national achievement level by the end of second grade. Those in the program kept up on this important developmental task.

Parents in SAFEChildren stopped a strong trend of less and less involvement in school and got re-engaged to be at their initial enthusiasm; the program blocked this seriously deleterious effect of parents dropping out of school involvement

Higher-risk parents who were provided the program showed improvements in parenting capabilities and their children improved in attention and behavior in school than higher-risk parents who did not get the program.

Higher-risk children assigned to the program had fewer behavior problems, better concentration, and more commitment to academic achievement than similar children not provided the program. While we are only now seeing what effects last until adolescence, from a prior version we found lower rates of alcohol and drug use and lower rates of violence.

By connecting families, tapping capabilities and providing support, we can help families in these high-risk communities. Other programs with similar strong scientific basis are developed for families residing in less risky communities. Organized through approaches such as Communities that Care and PROSPER, these can now be implemented to be useful and effective.

Sound approaches to implementation of scientifically tested programs can lead to effective programs that promote healthy development, protect against and prevent drug abuse and associated problems, and lead to sustained focus on this major health and social problem. The tools exist; they need to be utilized. The money is being spent, how well is the question.

Prevention Makes the Difference.

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Brief Number Three: Prevention Research to Promote the Health and Well-Being of Youth

Aleta Lynn Meyer, Ph.D. National Institute on Drug Abuse

The following representations of the slides being presented by Dr. Meyer have been re-formatted for the briefing book.

NIDA Prevention Research Branch Mission

NIDA's Prevention Research Branch supports a theory driven program of basic, clinical, and services research across the lifespan to reduce risks and prevent the initiation and progression of drug use to abuse and prevent drug-related HIV acquisition, transmission and progression

NIDA has published A Research-Based Guide: Preventing Drug Use Among Children & Adolescents for Parents, Educators and Community Leaders

Principles Related to Risk and Protective Factors

- *Prevention programs should,*
 - Enhance protective factors and reverse or reduce risk factors
 - Address all forms of drug abuse, alone or in combination
 - Address the drug abuse problems of the local community by targeting modifiable risk factors and strengthening protective factors
 - Tailor to address the risks specific to the target population

Principles Related to Prevention Planning

- *Family programs should,*

- Enhance family bonding, parenting skills and communication

- *School Programs should be specific to the developmental status of the children*

- Before/during the elementary school years: self control, emotional awareness, problem solving, communication & academic readiness/competence

- Middle, junior high and high school: peer relations, study habits and academic support, communication, self-efficacy and assertiveness, drug resistance skills

Family-Level Risk and Protective Factors

Risk Factors:

Harsh discipline

Rejection/neglect

Lax supervision

Parent/sibling drug use

High family conflict

Parent mental illness or life stress

Protective Factors:

Consistent discipline

Close family bond

Monitoring/supervision

Anti-drug family rules

Family communication

Functional family

Principles related to Prevention Program Delivery:

- When communities select programs to meet their needs, the implementation should retain the core elements of the original program***
- Prevention is an on-going effort with repeated programming over time to reinforce earlier goals and develop new skills***
- Teacher training in classroom management is a critical school-based prevention strategy***
- Evidence based prevention interventions are cost effective.***

The Prevalence of Evidence-Based Drug Use Prevention Curricula (EBC) in the Nation's Middle Schools in 2005

- Over 20 years of prevention science has produced many EBCs for school settings
- Long-term follow-up demonstrates impact that lasts into adulthood (with crossover effects)
 - Since 1998, many attempts have been made to promote implementation of EBCs. For example, schools receiving funds through Dept. of Ed's Safe and Drug Free Schools are required to implement EBCs on registries
 - Current study tracks use of universal EBCs into U.S. public middle schools in 1999 and 2005

More Schools Use Evidence-Based Curricula (EBC), but Most Still Do Not

- *Percent using any EBC*

- In 1999, 34.4

- In 2005, 42.6

- *Percent using mostly EBC*

- In 2005, 22.7

Additionally...

- *40% of middle schools used programs that were developed locally (17% used these the most)*
- *In a parallel study of high schools, 10% used EBCs (6% used EBC the most, Ringwalt et al, 2008).*

Research Questions

- Why do 75% of middle schools and 90% of high schools continue to administer curricula not identified as effective?
- Under what conditions do schools choose EBCs and continue to implement them?
- What adaptation, coaching, and technical assistance processes facilitate sustained implementation of EBCs?
- What community drivers promote uptake and sustainability?

Big Picture of Prevention Science

Summary: Using Prevention Research to Promote Health and Well-Being in Youth

•*Program Level*

- What is the evidence to indicate the program affects key risk and protective factors for substance use?
- Has it been implemented outside original site of research?

•*Community Level*

- What data is available about community's strengths and needs?
- What programs match the goals of this community?
- What community-level drivers exist to promote uptake and sustain the effort over time?
- What organizational supports exist within settings?

Abstracts of evidenced-based studies

Small, S.A., Cooney, S. M. & O'Connor, C. (2009). Evidence-informed program improvement: Using principles of effectiveness to enhance the quality and impact of family-based prevention programs. *Family Relations*, 58 (1), 1-13.

In recent years, federal, state, and local governments and other funding organizations have increased pressure for greater effectiveness and accountability of prevention programs, including those oriented toward families. This rising demand for program accountability has fueled a growing interest in evidence-based programs. Drawing on what is known about evidence-based prevention programs we discuss some common principles of effective programs and present a process for how practitioners can use these principles to improve the quality and impact of existing family programs. We term this approach evidence-informed program improvement.

Ringwalt, C. Vincus, A.A., Hanley, S., Ennett, S. T. Bowling, J. M. & Rohrbach, L.A. (2009). The prevalence of evidence-based drug use prevention curricula in U.S. middle schools in 2005. *Prevention Science*, 10 (1) 33-40.

Since the promulgation of its Principles of Effectiveness in 1998, the Office of Safe and Drug-Free Schools of the U.S. Department of Education has promoted the use of evidence-based drug prevention programs in the nation's schools. We report the results of a survey, conducted in 2005, of a nationally representative sample of 1,721 schools with middle school grades. Respondents comprised the staff member in the school identified as most knowledgeable about the school's drug prevention programs.

The total response rate was 78%. Respondents answered questions concerning which drug use prevention curricula they used, and, if they used more than one, which one they used the most frequently. Three federally sponsored registries were used to specify which curricula were considered evidence-based. Findings from 2005 were then compared to earlier estimates based on a similar 1999 survey. We found that 42.6% of the nation's schools with middle school grades were using an evidence-based curriculum, an increase of 8% from our 1999 estimate.

The two most prevalent curricula in use, at 19% each, were Life Skills Training and Project ALERT. We note, however, that only 8% of Life Skills Training users and 9% of Project ALERT users reported using those curricula the most, and that only 23% of respondents overall reported that they used an evidence-based curriculum the most. More information is needed as to why over three-quarters of the nation's schools with middle school grades continue to administer curricula that have not been identified as effective.

Bell, M., Padget, A., Kelley-Baker, T. & Rider, R. (2007) Can first and second grade students benefit from an alcohol use prevention program? *Journal of Child and Adolescent Substance Abuse*, 16 (3), 89-107.

Protecting You/Protecting Me (PY/PM) is a classroom based, alcohol use *prevention* and vehicle safety program for *elementary* students from first through fifth grades developed by Mothers Against Drunk Driving (MADD). PY/PM is one of the first alcohol *prevention* programs to target children as early as first grade. The focus of this study is on the youngest students receiving PY/PM, the first and second graders, who were surveyed over a three-year period. Results indicate that, relative to comparison students from matched classes, PY/PM students

increased their knowledge of vehicle safety, media awareness, growth and development, and dangers of alcohol to young persons. This study demonstrates that despite the inherent difficulties of surveying very young children, these children can benefit from an alcohol use *prevention* program that is carefully designed, implemented, and evaluated.

Kulis, S., Marsiglia, F. F., Elek, E., Dustman, P., Wagstaff, D. A. & Hecht, M. (2005). Mexican/ Mexican American adolescents and keepin' it REAL: An evidence-based substance use prevention program. *Children & Schools*, 27 (3) 133-145.

A randomized trial tested the efficacy of three curriculum versions teaching drug resistance strategies, one modeled on Mexican American culture; another modeled on European American & African American culture; & a multicultural version. Self report data at baseline & 14 months post-intervention were obtained from 3,402 Mexican heritage students in 35 Arizona middle schools, including 11 control sites. Tests for intervention effects used simultaneous regression models, multiple imputation of missing data, & adjustments for random effects.

Compared with controls, students in the Latino version reported less overall substance use & marijuana use, stronger intentions to refuse substances, greater confidence they could do so, & lower estimates of substance-using peers. Students in the multicultural version reported less alcohol, marijuana, & overall substance use.

Although program effects were confined to the Latino & multicultural versions, tests of their relative efficacy compared with the non-Latino version found no significant differences. Implications for evidence-based practice & prevention program designs are discussed, including the role of school social workers in culturally grounded prevention.

Werch, C. E., Moore, M. M., Diclemente, C.C., Owen, D. M., Carlson J. M. & Jobli, E. (2005). Single vs. multiple drug prevention: Is more always better? A pilot study. *Substance Use & Misuse*, 40 (8) 1085-1101.

Objective. The purpose of this study was to compare the effects of a single drug, i.e., alcohol, against a multiple drug preventive intervention. **Methods.** A controlled trial was conducted with 448 8th grade students (mean age = 13 years old) from an inner-city middle school (n = 216) & a rural junior high school (n = 232) in 2000-2001. Students were randomized within school, & 3-month post-intervention follow-up data were collected.

Results. Two risk/protective factors were found to differ significantly in favor of youth receiving the single drug alcohol intervention (p's = 0.03), while the frequency of alcohol use & two additional risk/protective factors approached significance (p's < 0.10). **Conclusion.** These findings support the potential efficacy of a brief, single drug preventive intervention over a brief, multi-drug intervention in producing short-term alcohol outcomes for adolescents, & indicate differential effects of interventions for subgroups of substance using youth.

Botvin, G. J., Griffin, K. W., Paul, E., Macaulay, A. P. (2003). Preventing tobacco and alcohol use among elementary school students through life skills training. *Journal of Child & Adolescent Substance Abuse*, 12 (4), 1-17.

The present study examined the effectiveness of a substance abuse prevention program in preventing tobacco & alcohol use among elementary school students in grades 3 through 6. The prevention program teaches social resistance skills & general personal & social competence skills.

Rates of substance use behavior, attitudes, knowledge, normative expectations, & related variables were examined among students (n = 1,090) from 20 schools that were randomly assigned to either receive the prevention program (9 schools, n = 426) or serve as a control group (11 schools, n = 664). Data were analyzed at both the individual level & school-level. Individual-level analyses controlling for gender, race, & family structure showed that intervention students reported less smoking in the past year, higher anti-drinking attitudes, increased substance use knowledge & skills-related knowledge, lower normative expectations for smoking & alcohol use, & higher self-esteem at the posttest assessment, relative to control students.

School-level analyses showed that annual prevalence rate was 61% lower for smoking & 25% lower for alcohol use at the posttest assessment in schools that received the prevention program when compared with control schools. In addition, mean self-esteem scores were higher in intervention schools at the posttest assessment relative to control schools. Findings indicate that a school-based substance abuse prevention approach previously found to be effective among middle school students is also effective for elementary school students.

Valentine, J., Griffith, J., Ruthazer, R., Gottlieb, B., Keel, S. (1998). Strengthening causal inference in adolescent drug prevention studies: Methods and findings from a controlled study of the urban youth connection program. *Drugs & Society*, 12 (1/2), 127-145.

Evaluates the Urban Youth Connection, a substance abuse prevention program for predominantly Hispanic & African American seventh- & eighth-grade students in Boston, MA. Pre- & posttest data gathered 1993-1996 in quasi-experimental fashion from paired & nonpaired self-administered questionnaires issued at a middle & a high school (total N = 336 students) were compared to data from other schools (total N = 443 students). Results indicate that the intervention helps to reduce the 30-day use of beer at the middle school level & beer, wine, & hard liquor at the high school level. Improvements in risk behaviors related to interpersonal violence & academic involvement were also noted. It is concluded that the program's success resulted from strong program-school collaboration, acceptance of participants at their level of health, gender-specific counseling, & staff role modeling.

DeMar, J. (1997). A school-based group intervention to strengthen personal and social competencies in latency-age children. *Social Work in Education*, 19 (4), 219-230.

The effectiveness of a primary preventive intervention to strengthen factors associated with personal & social competencies related to resilience in children that prevents future chemical dependency was tested in a sample of 57 third-, fourth-, & fifth-grade students in three southern FL elementary schools; 69% were black, Latino, or Asian. In general, the intervention groups performed significantly better than matched control groups in cognitive & behavioral areas.

Significant increases in internal locus of control, frustration tolerance, & assertive social skills were revealed, as well as a significant decrease in acting-out behavior.

Park, J., Kosterman, R., Hawkins, J.D., Haggerty, K. P., Duncan, T.E., Duncan, S. C., Spoth, R. (2000). Effects of the “Preparing for Drug Free Years” curriculum on growth in alcohol use and risk for alcohol use in early adolescence. *Prevention Science*, 1 (3), 125-138. Preparing for the Drug-Free Years (PDFY) is a curriculum designed to help parents learn skills to consistently communicate clear norms against adolescent substance use, effectively and proactively manage their families, reduce family conflict, and help their children learn skills to resist antisocial peer influences.

This study examined the effects of PDFY on the trajectories of these factors, as well as on the trajectory of alcohol use from early to mid adolescence. The sample consisted of 424 rural families of sixth graders from schools randomly assigned to an intervention or a control condition. Data were collected from both parents and students at pretest, posttest, and 1-, 2-, and 3 1/2-year follow-ups. Latent growth models were examined. PDFY significantly reduced the growth of alcohol use and improved parent norms regarding adolescent alcohol use over time. Implications for prevention and evaluation are discussed.

Marilia, F. F., Miles, B. W., Dustman, P. & Sills, S. (2002). Ties that protect: An ecological perspective on Latino/a urban pre-adolescent drug use. *Journal of Ethnic Cultural Diversity in Social Work*, 11 (3/4), 191-220.

An ecological risk and resiliency framework was applied to explore how social contexts, especially the role of families and schools, are affecting Latino pre-adolescent substance use in the urban Southwest. A mixed research design, using both quantitative and qualitative methodologies, guided the study. Quantitative data were collected through surveys administered as part of a school-based prevention intervention experiment (N = 2,125). Individual interviews conducted with a randomly selected number of matched students (N = 60) provided the qualitative data.

The main theme emerging throughout both data sets was a strong resilience against drug use of the participating 7th grade urban youth. The vast majority of students did not use hard drugs, and agreed that alcohol use was inappropriate at their age. A high degree of attachment and strong ties to their parents and their school environment emerged as a shared protective factor. Recommendations include social work interventions that support the resiliency characteristics of urban Latino youth in different social contexts such as communities, schools, and families. Limitations of the study are reviewed and suggestions for future research are offered.

Epstein, J., Collins, K. K., Thomson, N. R., Pancella, T. & Pauley, D. (2007). The Doubles: Evaluation of a substance abuse education curriculum for elementary school students. *Journal of Child & Adolescent Substance Abuse*, 16 (4), 1-22.

"The Doubles," funded by the National Institute on Drug Abuse, is a seven-episode series of media tools designed to teach third- and fourth-grade students about the science of drug addiction. The program's curriculum was delivered through a set of DVDs, interactive CD-ROMs, workbooks, or an Internet Site. Results indicate that although the interventions were successful in teaching students about the biological bases of substance abuse, they had little effect on student attitudes. Implications for future studies are discussed.

Hahn, E. J., Hall, L. A., Rayens, M.K., Myers, A. V. & Bonnel, G. (2007). School and home based drug prevention: Environmental, parental, and child risk reduction. *Drugs: Education, Prevention & Policy*, 14 (4) 319-331.

Abstract: The study purpose was to test the effect of a *school*- and home-based alcohol, tobacco, and other drug (ATOD) prevention program on reducing environmental, parent, and child risk factors for ATOD use. The design was a three-group pretest-posttest with interviews at baseline and 1 and 6 months post-intervention. The sample was 126 parents and their 5- to 6-year-old children from three *elementary schools* serving high-risk children.

The quality of the home environment, parents' depressive symptoms and *school* activity involvement, and parents' perception of child adjustment were measured. A *school*- and home-based version of Beginning Alcohol and Addictions Basic Education Studies (BABES) with a parent-child interaction component (BABES Plus) was compared to a classroom-only version of BABES (BABES Only) and a no-treatment control group.

The quality of the home environment improved and depressive symptoms decreased over the post-intervention period for the BABES Plus group, but not for the other two groups. The BABES Only group had greater parent involvement in *school* activities at 6 months post-intervention, compared to the other groups. Children's anxiety/withdrawal decreased and social competence increased over time for all groups. The effect of the BABES Plus intervention was demonstrated at 6 months for environmental and parental risk factors.

Hill, N. L. (2008). Adolescent substance use prevention interventions outside of classroom settings. *Child and Adolescent Social Work Journal*, 25 (6) 451-467.

Substance use prevention programs empowering individual adolescents to resist substance use through education and skills training are crucial to reducing substance use within this population. However, existing programs of this type are designed primarily for classroom use, and may not meet the needs of social workers intervening with adolescents outside classroom settings. A literature review identified six programs that have demonstrated statistically significant reductions in substance use when implemented outside the classroom. The current study describes these programs, identifies their common characteristics, and draws on additional prevention research to outline recommendations for practitioners seeking to apply the field's most current knowledge base in community settings.

Jenson, J. M., Dieterich, W. A., Rinner, J.R., Washington, F., Burgoyne, K. E. (2006). Implementation and design issues in group-randomized prevention trials: Lessons from the Youth Matters Public Schools Study. *Children & Schools*, 28 (4) 207-217.

Group-randomized trials (GRTs) -- studies that evaluate the efficacy or effectiveness of interventions occurring at the group level -- are increasingly used to assess the effects of school-based prevention programs on behavioral outcomes of children & adolescents. These designs pose many implementation & design challenges for school administrators, teachers, & researchers. This article discusses issues associated with the use of GRTs in school-based prevention experiments. Lessons learned from the Youth Matters prevention study, a GRT currently being conducted in 28 urban elementary schools, are outlined. Implications of GRTs for practice & research are noted.

Velleman, R. D. B., Templeton, L. J., Copello, A. G. (2005). The role of the family in preventing and intervening with substance use and misuse: A comprehensive review of family interventions, with a focus on young people. *Drug and Alcohol Review*, 24 (2) 93-109.

The family plays a key part in both preventing and intervening with substance use and misuse, both through inducing risk, and/or encouraging and promoting protection and resilience. This review examines a number of family processes and structures that have been associated with young people commencing substance use and later misuse, and concludes that there is significant evidence for family involvement in young people's taking up, and later misusing, substances.

Given this family involvement, the review explores and appraises interventions aimed at using the family to prevent substance use and misuse amongst young people. The review concludes that there is a dearth of methodologically highly sound research in this area, but the research that has been conducted does suggest strongly that the family can have a central role in preventing substance use and later misuse amongst young people.

A Comparison of Current Practice in School-Based Substance Use Prevention Programs with Meta-Analysis Findings

Ennett, S. T., Ringwalt, C. L., Thorne, J., Rohrbach, L. A., Vincus, A., Simons-Rudolph, A. & Jones, S. (2003). A comparison of current practice in school-based substance use prevention programs with meta-analysis findings. *Journal of Prevention* 4 (1), 1-14.

The series of seminal meta-analytic studies of school-based substance use prevention program studies conducted by the late Nancy S. Tobler and colleagues concluded that programs with content focused on social influences' knowledge, drug refusal skills, and generic competency skills and that use participatory or interactive teaching strategies were more effective than programs focused on knowledge and attitudes and favoring traditional didactic instruction.

The present study compared current school practice against evidence-based standards for “effective content” and “effective delivery,” derived from the Tobler findings. Respondents were the lead staff who taught substance use prevention in the 1998–1999 school year in a national sample of public and private schools that included middle school grades ($N = 1,795$). Results indicate that most providers (62.25%) taught effective content, but few used effective delivery (17.44%), and fewer still used both effective content and delivery (14.23%).

Those who taught an evidence-based program (e.g., Life Skills Training, Project ALERT), however, were more likely to implement both effective content and delivery, as were those teachers who were recently trained in substance use prevention and were comfortable using interactive teaching methods. The findings indicate that the transfer to practice of research knowledge about school-based substance use prevention programming has been limited.

Paski, B. Demetrovics, Z., Czako, A. (2002). Evaluation of school drug prevention programs--II. Summary of outcome evaluation results. *Addiktologia*, 1 (1) 38-49.

(NOTE: This study was done in Budapest.)The outcome of seven school drug programs in the Budapest area, directed towards 5th-10th-grade students was evaluated, drawing on paired pretest & posttest questionnaire data from 958 program participants. Significant differences in gender & program participation were found between the paired (evaluated) & unpaired (total) population. Findings indicate that 23.1% of the students felt that they knew more about drugs

after participating in the programs, with significant differences between individual programs. The proportion of those who felt they "knew everything they wanted to know" increased from 36.9% to 45.6%. No changes in self-efficacy were seen in any of the programs, although high basal levels of self-efficacy (over 3 in a scale of 4) may be responsible for this lack of effect.

Although in general no significant changes in the goal variables were observed, the self-efficacy of students with low (1-2) basal levels (a 25% of the population) increased, supporting the notion that drug prevention programs work for the more endangered populations. In relationship to the health belief model, perceived susceptibility was measured as the possibility of future drug use. Surprisingly, for all programs the possibility of future drug use increased significantly, 66% projected in the near future & 80% in the far future, with a positive correlation to the number of nights spent outside the home.

The effect on perceived susceptibility might be partly due to an involuntary effect of the program, i.e. "sensitization" to reality ("it can happen to me"). Perceived severity was measured as potential problems of drug use & potential dangers of consumption. The former also exhibited significant unfavorably changes, but there was an increase of the perceived danger of drug consumption, particularly of amphetamine, ecstasy & medications (very widespread in Hungary).

There were no significant differences related to the perceived barriers, although when analyzed at the different levels this was the area with most positive results. Of particular interest are here the issues related to peer pressure. In general there was a correlation between the basal level of the indicators & the effect obtained. Of the 181 expected changes, 24% moved in the expected direction, & 18% of them were significant. There was an 8% significant change or trend in the unfavorable direction. The range of positive changes varied among programs, between 6%-58%. Inconsistencies of the interpreters affected negatively the achievement of specific goals. Methodological recommendations for future studies are discussed.

Walsh, R. A. & Tzelepis, F. (2007). Adolescents and tobacco use: Systematic review of qualitative research methodologies and partial synthesis of findings. *Substance Use & Misuse*, 42 (8), 1269-1321.

After a brief overview of adolescent tobacco control, methodological features and content areas of 78 qualitative studies of adolescent smoking published in English prior to September 2002 were assessed. Narrative syntheses of three content areas - peer influences, access/sales issues, and dependence/addiction - were also undertaken. Many studies failed to provide sufficient sampling and subject characterization details and more effort was required to demonstrate data validity and reliability. Syntheses of the content areas revealed important common themes. Relationships to quantitative research were informative and suggested other research questions. The review highlights the heuristic value of qualitative research on adolescent smoking.

GLOSSARY OF TERMS

(Division of Workplace Programs, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services)

http://www.workplace.samhsa.gov/glossary/glossary_drugs.aspx

Addiction

A chronic, relapsing disease characterized by compulsive drug-seeking and abuse and by long-lasting chemical changes in the brain.

Amphetamine

Stimulant drugs whose effects are very similar to cocaine. Amphetamine, dextroamphetamine, methamphetamine, and their various salts are collectively referred to as amphetamines. In fact, their chemical properties and actions are so similar that even experienced users have difficulty knowing which drug they have taken. Methamphetamine is the most commonly abused.

Analgesics

A group of medications that reduce pain. Some of these medicines are also used just before or during an operation to help the anesthetic work better. Codeine and hydrocodone are also used to relieve coughing. Methadone is also used to help some people control their dependence on heroin or other narcotics. Narcotic analgesics may also be used for other conditions as determined by your doctor. Narcotic analgesics act in the central nervous system (CNS) to relieve pain. Some of their side effects are also caused by actions in the CNS. These medicines are available only with your medical doctor's or dentist's prescription. For some of them, prescriptions cannot be refilled and you must obtain a new prescription from your medical doctor or dentist each time you need the medicine. In addition, other rules and regulations may apply when methadone is used to treat narcotic dependence.

Barbiturates

Drugs that fall under the depressant category and are used medicinally to relieve anxiety, irritability, and tension. They have a high potential for abuse and development of tolerance. Depressants produce a state of intoxication similar to that of alcohol. When combined with alcohol, the effects are increased and risks are multiplied. Other drugs that fall under the depressant category include methaqualone, tranquilizers, chloral hydrate, and glutethimide.

Bath tub crank

Poor quality methamphetamine; methamphetamine produced in bath tubs

Batu

Smokable methamphetamine

Beannies

Methamphetamine

Bikers coffee

Methamphetamine and coffee

Black

Marijuana; opium; methamphetamine

Black beauty

Methamphetamine

Blade

Crystal methamphetamine

Bling bling

Methamphetamine

Blue devils

Methamphetamine

Blue meth

Methamphetamine

Boo

Marijuana; methamphetamine

Box labs

Small, mobile, clandestine labs used to produce methamphetamine

Brown

Marijuana; heroin; methamphetamine

Cannabinoids

Chemicals that help control mental and physical processes when produced naturally by the body and that produce intoxication and other effects when absorbed from marijuana.

Cannabis

The botanical name for the plant from which marijuana comes.

Chalk

Crack Cocaine; amphetamine; methamphetamine

Chicken Feed

Methamphetamine

Christmas tree

Marijuana; amphetamine; methamphetamine; depressant

Christmas tree meth

Green methamphetamine produced using Drano crystals

Cinnamon

Methamphetamine

Clear

Methamphetamine

Club Drugs

A wide variety of drugs being used by young people at dance clubs, bars, and all-night dance parties ("trances" or "raves"). These parties are usually held in a clandestine location with high-volume music, high-tech entertainment, and easy access to drugs. Club drugs are attractive to today's youth because they are inexpensive and produce increased stamina and intoxicating highs. Because many of these drugs are colorless, tasteless, and odorless, they can be secretly added to beverages by individuals who want to intoxicate or sedate others. The most widely used club drugs are; ecstasy, rohypnol, ketamine, GHB, and LSD. Research has shown that club drugs can have long-lasting negative effects on the brain, especially on memory function and motor skills. When club drugs are combined with alcohol, the effect is intensified, and they become even more dangerous and potentially fatal.

Cocaine

A powerfully addictive stimulant that directly affects the brain. Cocaine has been labeled the drug of the 1980s and '90s, because of its extensive popularity and use during this period. However, cocaine is not a new drug. In fact, it is one of the oldest known drugs. The pure chemical, cocaine hydrochloride, has been an abused substance for more than 100 years, and coca leaves, the source of cocaine, have been ingested for thousands of years. There are basically two chemical forms of cocaine: the hydrochloride salt and the "freebase." The hydrochloride salt, or powdered form of cocaine, dissolves in water and, when abused, can be taken intravenously (by vein) or intranasally (in the nose). Freebase refers to a compound that has not been neutralized by an acid to make the hydrochloride salt. The freebase form of cocaine is smokable. Cocaine is generally sold on the street as a fine, white, crystalline powder, known as "coke," "C," "snow," "flake," or "blow." Street dealers generally dilute it with such inert substances as cornstarch, talcum powder, and/or sugar, or with such active drugs as procaine (a chemically-related local anesthetic) or with such other stimulants as amphetamines.

Cook

Drug manufacturer; mix heroin with water; heating heroin to prepare it for injection

Cooker

To inject a drug; person who manufactures methamphetamine

CR

Methamphetamine

Crack Cocaine

The street name given to the freebase form of cocaine that has been processed from the powdered cocaine hydrochloride form to a smokable substance. The term "crack" refers to the crackling sound heard when the mixture is smoked. Crack cocaine is processed with ammonia or sodium bicarbonate (baking soda) and water, and heated to remove the hydrochloride. Because crack is smoked, the user experiences a high in less than 10 seconds. This rather immediate and euphoric effect is one of the reasons that crack became enormously popular in the mid 1980s. Another reason is that crack is inexpensive both to produce and to buy.

Crank

Crack Cocaine; heroin; amphetamine; methamphetamine; methcathinone

Crankster

Someone who uses or manufactures methamphetamine

Crink

Methamphetamine

Cris

Methamphetamine

Cristina (Spanish)

Methamphetamine

Cristy

Smokable methamphetamine

Croak

Crack mixed with methamphetamine; methamphetamine

Crossles

Methamphetamine

Crush and rush

Method of methamphetamine production in which starch is not filtered out of the ephedrine or pseudoephedrine tablets.

Crypto

Methamphetamine

Crystal

Cocaine; amphetamine; methamphetamine;PCP

Crystal glass

Crystal shards of methamphetamine

Crystal meth

Methamphetamine

Date Rape Drug

See Rohypnol

Depressants

Drugs used medicinally to relieve anxiety, irritability, and tension. They have a high potential for abuse and development of tolerance. Depressants produce a state of intoxication similar to that of alcohol. When combined with alcohol, the effects are increased and risks are multiplied. Drugs that fall under the depressant category include barbiturates, methaqualone, tranquilizers, chloral hydrate, and glutethimide.

Desocsins

Methamphetamine

Desogtion

Methamphetamine

Dopamine

A brain chemical, classified as a neurotransmitter, found in regions of the brain that regulate movement, emotion, motivation, and pleasure.

Dropping

Wrapping methamphetamine in bread and then consuming it

Drug

A chemical compound or substance that can alter the structure and function of the body. Psychoactive drugs affect the function of the brain, and some of these may be illegal to use and possess.

Drug abuse

The use of illegal drugs or the inappropriate use of legal drugs. The repeated use of drugs to produce pleasure, to alleviate stress, or to alter or avoid reality (or all three).

Ecstasy (MDMA)

A stimulant that combines the effects of amphetamines and hallucinogens. MDMA is a synthetic, psychoactive drug with both stimulant (amphetamine-like) and hallucinogenic (LSD-like) properties. Street names for MDMA include Ecstasy, Adam, XTC, hug, beans, and love drug. Its chemical structure (3-4 methylenedioxyamphetamine, "MDMA") is similar to methamphetamine, methylenedioxyamphetamine (MDA), and mescaline - other synthetic drugs known to cause brain damage. MDMA also is neurotoxic. In addition, in high doses it can cause a sharp increase in body temperature (malignant hyperthermia) leading to muscle breakdown and kidney and cardiovascular system failure.

Elbows

One pound of methamphetamine

Endogenous

Something produced by the brain or body.

Fast

Methamphetamine

Fire

Crack and methamphetamine; to inject a drug

Five-way

Combines snorting of heroin, cocaine, methamphetamine, ground up flunitrazepam pills, and drinking alcohol

The five way

Heroin plus cocaine plus methamphetamine plus Rohypnol (flunitrazepam) plus alcohol

Gamma Hydroxy Butyrate (GHB)

In the 1980s, GHB was widely available over the counter in health food stores, and bodybuilders used it to lose fat and build muscle. GHB has been given nicknames such as Grievous Bodily Harm, G, Liquid Ecstasy, and Georgia Home Boy. In 1990, the Food and Drug Administration banned the use of GHB except under the supervision of a physician because of reports of severe side effects, including euphoric and sedative effects similar to the effects experienced after taking Rohypnol (the "date rape" drug.) GHB also has been associated with sexual assaults in cities throughout the United States (NIDA, Infotax.) Despite the ban on use, GHB is created in clandestine laboratories, in a variety of forms, including clear liquid, white powder and tablet. Increasing use rates are being reported. In 1998, the Denver Poison Control Center received 33 calls involving GHB, and almost half of these cases were considered life-threatening. (NIDA Infotax-Club Drugs, 2000.) Because it clears from the body relatively quickly, it is often difficult to detect when patients go to emergency rooms and other treatment facilities.

Gangster

Marijuana; person who uses or manufactures methamphetamine

Geep

Methamphetamine

Geeter

Methamphetamine

Getgo

Methamphetamine

Getting glassed

To snort methamphetamine

Glass

Heroin; amphetamine; hypodermic needle; methamphetamine

Go-fast

Methcathinone; crank; methamphetamine

Granulated Orange

Methamphetamine

Half elbows

1/2 pound of methamphetamine

Hallucinogens

Drugs that cause hallucinations - profound distortions in a person's perceptions of reality. Under the influence of hallucinogens, people see images, hear sounds, and feel sensations that seem real but do not exist. Some hallucinogens also produce rapid, intense emotional swings. Hallucinogens cause their effects by disrupting the interaction of nerve cells and the neurotransmitter serotonin. Distributed throughout the brain and spinal cord, the serotonin system is involved in the control of behavioral, perceptual, and regulatory systems, including mood, hunger, body temperature, sexual behavior, muscle control, and sensory perception. LSD (an abbreviation of the German words for "lysergic acid diethylamide") is the drug most commonly identified with the term "hallucinogen" and the most widely used in this class of drugs. It is considered the typical hallucinogen, and the characteristics of its action and effects described in this Research Report apply to the other hallucinogens, including mescaline, psilocybin, and ibogaine.

Hanyak

Smokable methamphetamine

Heroin/Morphine

A highly addictive drug, and its use is a serious problem in America. Recent studies suggest a shift from injecting heroin to snorting or smoking because of increased purity and the misconception that these forms of use will not lead to addiction. Heroin is processed from morphine, a naturally occurring substance extracted from the seedpod of the Asian poppy plant. Heroin usually appears as a white or brown powder. Street names for heroin include "smack," "H," "skag," and "junk." Other names may refer to types of heroin produced in a specific geographical area, such as "Mexican black tar."

Hironpon

Smokable methamphetamine

Hiropon

Smokable methamphetamine

Holiday meth

Green methamphetamine produced using Drano crystals

Hot Ice

Smokable methamphetamine

Hot rolling

Liquefying methamphetamine in an eye dropper and then inhaling it

Hotrailing

To heat methamphetamine and inhale the vapor through nose using a plastic tube

Hugs and Kisses

Combination of methamphetamine and methylenedioxymethamphetamine (MDMA)

Hydro

Amphetamine; high quality methamphetamine; marijuana; methylenedioxymethamphetamine (MDMA); marijuana grown in water (hydroponic)

Ice

Cocaine; crack cocaine; smokable methamphetamine; methamphetamine; methylenedioxymethamphetamine (MDMA); phencyclidine (PCP)

Inhalants

Breathable chemical vapors that produce psychoactive (mind-altering) effects. Although people are exposed to volatile solvents and other inhalants in the home and in the workplace, many do not think of inhalable substances as drugs because most of them were never meant to be used in that way. Young people are likely to abuse inhalants, in part because inhalants are readily available and inexpensive. Sometimes children unintentionally misuse inhalant products that are found in household products. Parents should see that these substances are monitored closely so that they are not inhaled by young children. Inhalants fall into the following categories: Solvents: Industrial or household solvents or solvent-containing products, including paint thinners or solvents, degreasers (dry-cleaning fluids), gasoline, and glues Art or office supply solvents, including correction fluids, felt-tip-marker fluid, and electronic contact cleaners Gases - Gases used in household or commercial products, including butane lighters and propane tanks, whipping cream aerosols or dispensers (whippets), and refrigerant gases - Household aerosol propellants and associated solvents in items such as spray paints, hair or deodorant sprays, and fabric protector sprays - Medical anesthetic gases, such as ether, chloroform, halothane, and nitrous oxide (laughing gas) Nitrites - aliphatic nitrites, including cyclohexyl nitrite, which is available to the general public; amyl nitrite, which is available only by prescription; and butyl nitrite, which is now an illegal substance.

Inhalation

The act of administering a drug or combination of drugs by nasal or oral respiration. Also, the act of drawing air or other substances into the lungs. Nicotine in tobacco smoke enters the body by inhalation. [5]

Injection

A method of administering a substance such as a drug into the skin, subcutaneous tissue, muscle, blood vessels, or body cavities, usually by means of a needle.

Jet fuel

PCP; methamphetamine; methamphetamine combined with PCP (phencyclidine)

Kaksonjae

Smokable methamphetamine

Ketamine

a central nervous system depressant that produces a rapid-acting dissociative effect. It was developed in the 1970s as a medical anesthetic for both humans and animals. Ketamine is often mistaken for cocaine or crystal methamphetamine because of a similarity in appearance (NCADI, 2000). Also known as K, Special K, Vitamin K, Kit Kat, Keller, Super Acid, and Super C, Ketamine is available in tablet, powder, and liquid form. So powerful is the drug that, when injected, there is a risk of losing motor control before the injection is completed. In powder form, the drug can be snorted or sprinkled on tobacco or marijuana and smoked (Partnership for a Drug-Free America, 2000). The effects of Ketamine last from 1 to 6 hours, and it is usually 24-48 hours before the user feels completely "normal" again.

L.A. glass

Smokable methamphetamine

L.A. ice

Smokable methamphetamine

Lemon drop

Methamphetamine with a dull yellow tint

Lithium

Better grade methamphetamine

Lithium scabs

Open scabs and skin lesions due to methamphetamine abuse

Load of Laundry

Methamphetamine

Lysergic Acid Diethylamide (LSD)

An hallucinogenic drug that acts on the serotonin receptor. LSD was discovered in 1938 and is one of the most potent mood-changing chemicals. It is manufactured from lysergic acid, which is found in ergot, a fungus that grows on rye and other grains. LSD, commonly referred to as "acid," is sold on the street in tablets, capsules, and, occasionally, liquid form. It is odorless, colorless, and has a slightly bitter taste and is usually taken by mouth. Often LSD is added to absorbent paper, such as blotter paper, and divided into small decorated squares, with each square representing one dose. The Drug Enforcement Administration reports that the strength of LSD samples obtained currently from illicit sources ranges from 20 to 80 micrograms of LSD per dose. This is considerably less than the levels reported during the 1960s and early 1970s, when the dosage ranged from 100 to 200 micrograms, or higher, per unit.

Marijuana

A green, brown, or gray mixture of dried, shredded leaves, stems, seeds, and flowers of a plant. You may hear marijuana called by street names such as pot, herb, weed, grass, boom, Mary Jane, gangster, or chronic. There are more than 200 slang terms for marijuana. Sinsemilla (sin-

seh-me-yah; it's a Spanish word), hashish ("hash" for short), and hash oil are stronger forms of marijuana. All forms of marijuana are mind-altering. In other words, they change how the brain works. They all contain THC (delta-9-tetrahydrocannabinol), the main active chemical in marijuana. They also contain more than 400 other chemicals. Marijuana's effects on the user depend on the strength or potency of the THC it contains. THC potency of marijuana has increased since the 1970s but has been about the same since the mid-1980s.

Maui-wowie

Marijuana; methamphetamine

Medication

A drug that is used to treat an illness or disease according to established medical guidelines.

Meth

Methamphetamine

Meth head

Methamphetamine regular user

Meth monster

One who has a violent reaction to methamphetamine

Meth speed ball

Methamphetamine combined with heroin

Methamphetamine

A powerfully addictive stimulant that dramatically affects the central nervous system. The drug is made easily in clandestine laboratories with relatively inexpensive over-the-counter ingredients. These factors combine to make methamphetamine a drug with high potential for widespread abuse. Methamphetamine is commonly known as "speed," "meth," and "chalk." In its smoked form, it is often referred to as "ice," "crystal," "crank," and "glass." It is a white, odorless, bitter-tasting crystalline powder that easily dissolves in water or alcohol. The drug was developed early in this century from its parent drug, amphetamine, and was used originally in nasal decongestants and bronchial inhalers. Methamphetamine's chemical structure is similar to that of amphetamine, but it has more pronounced effects on the central nervous system. Like amphetamine, it causes increased activity, decreased appetite, and a general sense of well-being. The effects of methamphetamine can last 6 to 8 hours. After the initial "rush," there is typically a state of high agitation that in some individuals can lead to violent behavior.

Methlies Quik

Methamphetamine

Mexican crack

Methamphetamine with the appearance of crack; methamphetamine

Mexican speedballs

Crack and methamphetamine

Motorcycle crack
Methamphetamine

Nazimeth
Methamphetamine

Nicotine
One of the most heavily used addictive drugs in the United States. Cigarette smoking has been the most popular method of taking nicotine since the beginning of the 20th century. In 1998, 60 million Americans were current cigarette smokers (28 percent of all Americans aged 12 and older), and 4.1 million were between the ages of 12 and 17 (18 percent of youth in this age bracket). In 1989, the U.S. Surgeon General issued a report that concluded that cigarettes and other forms of tobacco, such as cigars, pipe tobacco, and chewing tobacco, are addictive and that nicotine is the drug in tobacco that causes addiction. In addition, the report determined that smoking was a major cause of stroke and the third leading cause of death in the United States.

Opiates/Narcotics
Also known as "narcotic analgesics". Concern about the abuse of prescription painkillers has risen dramatically in the U.S. Of particular concern is the abuse of pain medications containing opiates, marketed under such brand names as Vicodin, OxyContin, Percocet, Demerol, and Darvon. According to the Drug Abuse Warning Network (DAWN), the incidence of emergency department (ED) visits related to narcotic analgesic abuse has been increasing in the U.S. since the mid-1990s, and more than doubled between 1994 and 2001.

OZs
Methamphetamine

P and P
Methamphetamine used in combination with MDMA (methylenedioxyamphetamine) and Viagra

Paper
A dosage unit of heroin; one-tenth of a gram or less of the drug ice or methamphetamine

Party and play
Methamphetamine used in combination with MDMA (methylenedioxyamphetamine) and Viagra

Passive Inhalation
The exposure of non-smoking subjects to side-stream smoke from active smokers, thereby raising the possibility that a non-user may test positive.

Peanut butter
Methamphetamine; PCP mixed with peanut butter

Phencyclidine (PCP)
Also known as "angel dust" and is a hallucinogen. It is difficult to estimate the current use of phencyclidine in the United States because many individuals do not recognize

that they have taken it. PCP is frequently laced with other illicit substances (such as marijuana) and the buyer not made aware of its presence. PCP use in the U.S. dates back to 1967 when it was sold as the "Peace Pill" in the Haight-Ashbury district of San Francisco. Its use never became very popular because it had a reputation for causing "bad trips." PCP use grew during the mid-1970s primarily because of different packaging (sprinkling on leaves that are smoked) and marketing strategies. During the 1980s it was established as the most commonly used hallucinogen, with the majority of users 15 to 25 years old. Although phencyclidine was initially developed by a pharmaceutical company searching for a new anesthetic, it was not suitable for human use because of its psychotropic side effects. PCP is no longer manufactured for legitimate, legal purposes. Unfortunately it can be made rather easily and without great expense by anyone with a basic knowledge of organic chemistry, making it a prime drug for the illicit drug industry. It is available illegally as a white, crystalline powder that can be dissolved in either alcohol or water.

Physical dependence
An adaptive physiological state that occurs with regular drug use and results in a withdrawal syndrome when drug use is stopped; usually occurs with tolerance.

Pink
Methamphetamine

Pink elephants
Methamphetamine

Pink hearts
Amphetamine; methamphetamine

Po coke
Methamphetamine

Poor man's coke
Methamphetamine

Poppers
Isobutyl nitrite; amyl nitrite; methamphetamine

Prescription Drugs
Make complex surgery possible, relieve pain for millions of people, and enable many individuals with chronic medical conditions to control their symptoms and lead productive lives. Most people who take prescription medications use them responsibly. However, the non-medical use of prescription drugs is a serious public health concern. Nonmedical use of prescription drugs like opioids, central nervous system (CNS) depressants, and stimulants can lead to abuse and addiction, characterized by compulsive drug seeking and use. Addiction rarely occurs among people who use a pain reliever, CNS depressant, or stimulant as prescribed; however, inappropriate use of prescription drugs can lead to addiction in some cases. Patients, healthcare professionals, and pharmacists all have roles in preventing misuse and addiction. For example, if a doctor prescribes a pain medication, CNS depressant, or stimulant,

the patient should follow the directions for use carefully, and also learn what effects the drug could have and potential interactions with other drugs by reading all information provided by the pharmacist. Physicians and other health care providers should screen for any type of substance abuse during routine history-taking with questions about what prescriptions and over-the-counter medicines the patient is taking and why.

Psychedelic drug

A drug that distorts perception, thought, and feeling. This term is typically used to refer to drugs with actions like those of LSD.

Psychoactive drug

A drug that changes the way the brain works.

Quartz

Smokable methamphetamine

Quill

Cocaine; heroin; methamphetamine

Receptor

A large molecule that recognizes specific chemicals (normally neurotransmitters, hormones, and similar endogenous substances) and transmits the message carried by the chemical into the cell on which the receptor resides. [5]

Red

Under the influence of drugs; methamphetamine

Redneck cocaine

Methamphetamine

Relapse

In drug abuse, relapse is the resumption of drug use after trying to stop taking drugs. Relapse is a common occurrence in many chronic disorders, including addiction, that require behavioral adjustments to treat effectively.

Reuptake

The process by which neurotransmitters are removed from the synapse by being "pumped" through transporters back into the axon terminals that first released them.

Reward

The process that reinforces behavior. It is mediated at least in part by the release of dopamine into the nucleus accumbens. Human subjects report that reward is associated with feelings of pleasure.

Rock

Methamphetamine

Rohypnol

Trade name for flunitrazepam, has been a concern for the last few years because of its abuse as a "date rape" drug. People may unknowingly be given the drug which, when

mixed with alcohol, can incapacitate a victim and prevent them from resisting sexual assault. Also, Rohypnol may be lethal when mixed with alcohol and/or other depressants. Rohypnol produces sedative-hypnotic effects including muscle relaxation and amnesia; it can also produce physical and psychological dependence. In Miami, one of the first sites of Rohypnol abuse, poison control centers report an increase in withdrawal seizures among people addicted to Rohypnol. Rohypnol is not approved for use in the United States and its importation is banned. Illicit use of Rohypnol began in Europe in the 1970s and started appearing in the United States in the early 1990s, where it became known as "roofies," "roofies," "roach," "rope," and the "date rape" drug. Another very similar drug is now being sold as "roofies" in Miami, Minnesota, and Texas. This is clonazepam, marketed in the U.S. as Klonopin and in Mexico as Rivotril. It is sometimes abused to enhance the effects of heroin and other opiates. Based on emergency room admission information, Boston, San Francisco, Phoenix, and Seattle appear to have the highest use rates of clonazepam.

Route of administration

The way a drug is put into the body. Drugs can enter the body by eating, drinking, inhaling, injecting, snorting, smoking, or absorbing a drug through mucous membranes.

Schmiz

Methamphetamine

Scotie

Methamphetamine

Shabu

Combination of powder cocaine and methamphetamine; crack cocaine; methamphetamine; methylenedioxymethamphetamine (MDMA)

Sketch

Methamphetamine

Smokeless Tobacco

Like cigarettes, comes from the tobacco plant. Unfortunately, most of the publicity focused only on the health hazards associated with cigarette smoking. While the number of cigarette smokers in the United States has continually decreased over recent years, the number of smokeless tobacco users has steadily increased. Since the 1970s, a 15-fold increase in smokeless tobacco has been noted in adolescents aged 17 to 19. This has most likely been related to the emphasis on smoke-free environments; availability of tobacco products; increased advertising of smokeless products; macho, athletic role models who use and advertise for smokeless products; and the false belief that smokeless tobacco is a safe alternative for those convinced they should stop smoking but who still want (are addicted to) the nicotine effects of tobacco.

Smoking Cessation

Means to quit or stop smoking. Some tips to help people quit smoking include: -Enroll in a smoking cessation program (hospitals, health departments, community centers,

and work sites frequently offer programs). -Ask your health care provider for help, including whether prescription medications (such as Zyban) might help. -Find out about nicotine patches, gum, and sprays. -Hypnosis may help some people. -Ask your family, friends, and people you work with for help. -Avoid smoke-filled settings and situations in which you are more likely to smoke. -Start reducing your cigarette use, including decreasing the number and strength of the cigarettes. -Set a quit date. -Quit completely--cold turkey. -Exercise to relieve urges to smoke. -Get rid of all your cigarettes. -Make a plan about what you will do instead of smoking when you are stressed

Smoking During Pregnancy

Can lead to increased fetal death, premature labor, low birthweight infants, and SIDS (sudden infant death syndrome), which are all specific health risks associated with tobacco use.

Soap

Gamma hydroxybutyrate (GHB); crack cocaine; methamphetamine

Soap dope

Methamphetamine with a pinkish tint

Spackle

Methamphetamine

Sparkle

Methamphetamine that has a somewhat shiny appearance

Speckled birds

Methamphetamine

Speed

Crack Cocaine; amphetamine; methamphetamine

Speed freak

Habitual user of methamphetamine

Speedballing

To shoot up or smoke a mixture of cocaine and heroin; ecstasy mixed with ketamine; the simultaneous use of a stimulant with a depressant

Spoosh

Methamphetamine

Stimulants

A class of drugs that elevates mood, increases feelings of well-being, and increases energy and alertness. These drugs produce euphoria and are powerfully rewarding. Stimulants include cocaine, methamphetamine, and methylphenidate (Ritalin).

Stove top

Crystal methamphetamine; methamphetamine

Super ice

Smokable methamphetamine

Super X

Combination of methamphetamine and methylenedioxymethamphetamine (MDMA)

Superlab

Clandestine laboratories capable of producing 10 pounds of methamphetamine in 24 hours

THC (Tetrahydrocannabinol)

Delta-9-tetrahydrocannabinol; the main active ingredient in marijuana, which acts on the brain to produce its effects.

Tic

PCP in powder form; methamphetamine

Tick tick

Methamphetamine

Tina

Methamphetamine; crystal methamphetamine; methamphetamine used with Viagra

Tobacco

A plant grown for its leaves, which are smoked, chewed, or sniffed for a variety of effects. It is considered an addictive substance because it contains the chemical nicotine. The tobacco plant is believed to have originated in the Western Hemisphere. The leaves of the plant are prepared for smoking, chewing, or sniffing. In addition to nicotine, tobacco contains over 19 known carcinogens (most are collectively known as "tar") and more than 4,000 chemicals. Prior to European influence in the Americas, tobacco was used by the Indians of Mexico and Peru for ceremonies, medicinal purposes, and to alleviate hunger pangs during famines. Columbus is credited with introducing tobacco into Europe. Tobacco use became widely accepted by the Portuguese, Spanish, French, British, and Scandinavians. Explorers and sailors who became dependent upon tobacco began planting seeds at their ports of call, introducing the product into other parts of Europe and Asia. The colonists introduced tobacco on the American continent in the early 1600s. It became a major crop and trading commodity of the Jamestown colony. Over the years, tobacco has been claimed as a cure for a wide range of ailments with varying forms of administration (for example, used in poultices, pastes, smoked, chewed, sniffed, or placed in any body cavity). Its social importance also grew over the years, even to the point of denoting the "modern or liberated woman" during the first part of the twentieth century. It was not until the 1960s, with the introduction of medical research related to cigarette smoking, that the adverse health effects of tobacco became widely publicized.

Tolerance

A condition in which higher doses of a drug are required to produce the same effect as during initial use; often leads to physical dependence.

Trash

Methamphetamine

Tweek

Methamphetamine-like substance

Twisters

Crack and methamphetamine

Wash

Methamphetamine

Water

Blunts; methamphetamine; PCP; a mixture of marijuana and other substances within a cigar; Gamma hydroxybutyrate (GHB)

Wet

Blunts mixed with marijuana and PCP; methamphetamine; marijuana cigarettes soaked in PCP ("embalming fluid") and dried

White Cross

Amphetamine; methamphetamine

Withdrawal

Symptoms that occur after chronic use of a drug is reduced or stopped.

Work

Methamphetamine

Working man's cocaine

Methamphetamine

Ya Ba

A pure and powerful form of methamphetamine from Thailand; "crazy drug"

Yellow bam

Methamphetamine

Yellow jackets

Depressants; methamphetamine

Yellow powder

Methamphetamine

Note: This list is not inclusive; terms vary geographically and over time.