

RECOMMENDATIONS FOR EFFECTIVE DRUG EDUCATION

University of Stirling

Evidence-based indicators

1. Drug education should be highly interactive. Interactive delivery is a proven feature of effective drug education programmes. Non-interactively delivered programmes are consistently less effective.
2. Drug education should include but should not rely solely on information provision.
3. Drug education should not rely solely on 'affective' approaches designed to boost self-esteem and generic social competence. Whatever their other potentially positive effects, these approaches have proven consistently to be less effective at reducing substance use.
4. Drug education should include life skills elements, but not without the social influences elements listed below.
5. Drug education should be based on a social influences approach, specifically including resistance skills and normative education elements. Programmes based on these approaches have proven consistently to be more effective. Normative education – examining and challenging perceptions of the prevalence and acceptability of drug use in particular is a significant mediator of programme effectiveness.
6. Drug education programmes which are part of multi-component and 'environmental' programmes are likely to be more effective than those delivered in isolation. Environmental approaches such as improved classroom management and alternative groupings of pupils are promising approaches, as are whole school/health promotion school approaches.
7. Peer education approaches should be considered, as peer involvement in drug education programmes is associated with increased effectiveness. Peers, teachers and other professionals can all be effective deliverers of drug education programmes providing they deliver to a high standard and are perceived as credible and trustworthy by students.
8. Drug education programmes should be of a sufficient length to achieve impact; longer programmes may be better than shorter programmes, but it is not entirely clear.
9. Both generic programmes (addressing all drugs) and single-drug programmes can be effective. If generic programmes are implemented, care needs to be taken to ensure that messages about the effects and risks of different drugs do not cause confusion or give the impression that because some drugs are particularly risky, others are safe.
10. Drug education should be delivered in both primary and secondary schools. There is no evidence to suggest that it is more effective at older or younger ages, although clearly the objectives and content should be age-specific.
11. Drug education should be relevant and socially and culturally specific to the targeted population.
12. Drug education programmes should be delivered to as high a quality as possible, recognising that the optimum delivery conditions which usually apply during an experimental trial are unlikely to apply during 'real world' delivery. It is difficult to specify what delivery quality standard should be attained – it is likely to vary for different programmes and in different contexts. Nonetheless, better results are generally obtained when programmes are delivered to a higher quality.

Heroin Project Focus Groups Summary of Findings

April 26, 2011

A Partnership of

**Southwest Coalition
for Substance Abuse Issues**

Will County Juvenile Justice Council

Chestnut Health Systems

Heroin Focus Groups Summary of Findings

Purpose

Heroin is having a rapidly increasing and devastating impact on the youth and families in Will County. The primary purpose of conducting this series of focus groups is to use the information to generate recommendations and develop a comprehensive plan to address this issue. It is also hoped that conducting focus groups from a cross section of community sectors will provide a clearer picture of the scope of the current problem and point toward solutions that archival data alone cannot provide.

Methodology

A total of seven focus groups were conducted between February and April 2011. The focus groups represented the following sectors: substance abuse treatment providers; deans of high schools; probation officers; first responders; parents; recovering adults; and high school youth. It should be noted that the parent focus group consisted of parents who currently had a child struggling with heroin addiction or had lost a child as a result of heroin addiction. From the above described focus groups, there were a total of 76 participants.

The same trained facilitator conducted all of the focus groups for the sake of consistency. From a group of three trained observers, at least two observers were present to collect data from the discussions at all but one focus group. This allowed for accuracy and consistency in data collection. Prior to the beginning of each focus group, participants were asked to complete a ballot which consisted of three questions that would later be a part of the discussion. The purpose was to get the perspective of participants prior to being influenced by the thoughts and ideas of others. The ballots also contributed to a specificity and clarity of thoughts and ideas that may not have been captured from the discussion alone. Lastly, the ballots permitted the preservation of information from shy or less vocal participants. The purpose of the project was explained to each focus group and it was stated that this was a joint project of the Southwest Coalition on Substance Abuse Issues, the Will Count Juvenile Justice Commission, and Chestnut Health Systems. Also, participants were told that everything would be kept confidential and that information would not be tied to any individual and only be reported in the aggregate. All groups were asked the same set of questions contained in the facilitator's guide.

The data was analyzed by the same facilitator and observers that were present at the focus groups in order to ensure integrity and accuracy of the data. The data was analyzed for trends and frequency of mentions across all focus groups. During analysis of the data, however, it became evident that some independent ideas and solutions that were particularly cogent and innovative were worthy to bring forth in the summary of findings. Also, when the ballot questions and

discussion questions were the same, the data was summarized together in order to obtain the clearest picture of the results.

Summary of Results

Age of First Use, Patterns of Use, Typical Progression

When asked about the age of first use of any substance, there was overwhelming consensus across all groups that middle school was the age when this occurs. When asked to identify the patterns of youth substance use or the typical progression of substance usage, the result was thematic with some variations. The gateway concept held true for the most part in that cigarettes or alcohol were the substances that most youth tried first. The substances that followed the use of alcohol or cigarettes varied greatly and were influenced most by what their peers happened to be using. In fact, a significant theme was that the primary factor in the specifics of progression was determined by social influence. Substances would be skipped and the sequence of substances was determined by what the peer group was using rather than preference for a particular substance. There was significant discussion, that in some instances, alcohol and cigarettes would be bypassed and the substance of first use would be marijuana or pills (prescription drugs). The emergence of the use of prescription drugs obtained either from the home medicine cabinet or through the over prescribing of drugs was cited as a growing trend. In terms of heroin, however, it was clearly a consensus that heroin was never the first substance a youth used. Heroin, however, has severely collapsed the time frame of the addiction progression. Due to the highly addictive nature of heroin and its introduction into the usage pattern at younger ages, what took years for the progression in previous generations, can now only take a matter of months or, in some cases, even weeks.

Heroin and Youth Substance Use / The Problem Now

When asked how heroin fits into the pattern of youth substance use, the data revealed a number of concerning themes. Although as mentioned previously, heroin is never the first substance used by youth, a number of contributing factors have come together in a “perfect storm” of sorts to cause the devastating impact of heroin today. These six contributing factors are...

- Heroin is cheap
- Heroin is easy to get
- Initially, heroin is easy to use
- Heroin is a better, or the best high
- The heroin stigma is gone in youth
- The heroin stigma still exists among parents, schools, and the community

The contributing factors that heroin is cheap and easy to get go hand in hand. As the availability has increased, the price has decreased. This allows for many drug dealers that have been selling marijuana, for example, to now have heroin

as part of their inventory. The fact that heroin can be snorted is the primary reason, at least initially, that heroin is seen as easy to use. As heroin has become cheaper, more available, and seen as easy to use, correspondingly, usage has increased among young people. As the ease of use (snorting instead of using needles) has become the norm, an increasing number of peer groups have begun to use. The result is that the heroin stigma has disappeared among youth. It's not just "junkies" or the lowest of low that use heroin, but young people just like themselves. Add to this dangerous mix of contributing factors the fact that heroin is not only a better high, but a high so great that it defies description, and this destructive "perfect storm" comes together. Although the sixth contributing factor entered the discussion under another question, it is vitally important to bring it to light in this section of the report. This is the fact that the heroin stigma still exists for parents, schools, and the community. For these, it remains that heroin is the horrible, awful, shameful drug that only "junkies" or the lowest of low would use. This feeds the denial that their son/daughter, student, or the youth in their town would never use this horrific drug. The shame of this stigma is a powerful contributor to the suppression of information by parents, schools, and others in the community. Accurate information about the nature and extent of drug overdoses and deaths are found only in the coroner's report, not in the news, school information, or obituaries. Thus, the true extent of the burgeoning impact heroin is having on the youth and families in Will County is unknown to most people.

Heroin Use Trends

The focus groups confirmed the findings of the Roosevelt University study of heroin trends in the Chicago suburbs. In particular, there has been a dramatic increase in heroin abuse by white males between the ages and 18 to 25. Also, there has been a dramatic increase in heroin overdoses and deaths in the last three to five years. The focus groups, however, were able to shed new light on the heroin problem in Will County. The first concern is that heroin is beginning to be used by those under 18. Also, more females are beginning to use heroin. Although heroin use can occur within any economic status, the trend in Will County is leaning toward middle and upper class families.

Why Youth Begin Using

There were two primary reasons cited for why youth begin using substances in the first place. The theme with the highest number of mentions centered on family issues. These included a variety of specific causes including:

- Lack of quality relationships between parents and youth
- Family management problems
- Lack of discipline
- Lack of awareness by parents of drug related issues
- Family conflict
- Family genetic predisposition for substance abuse
- Family drug usage

The second most highly discussed reason for youth to begin using substances was social influence or peer pressure. These reasons were characterized by the following:

- Desire to fit in
- Peer access to drugs
- Peer drug usage
- Pro alcohol and other drug messages in media and culture
- Perceptions of peer usage
- Joining other peers striving for independence or rebellion

The third most cited reason for youth to start using substances was mental health issues. The specifics were widely varied but included:

- Depression
- Anxiety
- Psychological trauma
- Inability to cope with major life events such as death of a loved one, mobility, economic stressors, or failure to excel
- Self medication for undiagnosed mental health issues

The Impact of Heroin

The impact heroin is having on the individuals and families, is in some ways difficult to quantify. Statistics tell us that there are increases in heroin related overdoses and deaths. Some crime and theft increases can be attributed to those addicted to heroin needing money to support their habit. The focus groups have cited that the legal consequences alone of being caught with heroin can have a life long negative impact because of the felony designation. The clearest path to understanding the impact of heroin on individuals and families is through the voices of the parent focus group. Here follows quotes from our discussion on the impact of heroin on families...

"It devastates the family." "It breaks the soul of the family." "You never sleep. You wonder when you're going to get the call." "Other siblings think it is not their problem, but it is." "They sell everything not bolted down because they need \$200 a day." "They always think they're going to beat the system." "Suicides happen." "You wonder when you're going to find him laying there with a needle in his arm." "You're always asking, who is with him?" "I have called a drug dealer to find out where my son was." "The kids hear, 'We have a special going on today.'" "The heroin stigma is gone." "They sell their blood for \$5." "Friends, a cell phone, and a car will kill the kid." "You toss strangers out of your house." "There is the paranoia of the drug user, and the paranoia of the parent - afraid to leave, afraid to come home." "You go to bed scared." "You lock the door when you're sleeping." "You frisk your own kid, strip them down." "If you lose a child, you lose friends. You are a reminder of their worst nightmare." "When my son

died 30 months ago, nobody was dying from it. Since then, I've been to twelve wakes." "You don't know what to do to save their life." "Eventually you pray that they get arrested." "There is no relief from the stress." "You stay up all night praying." "Hope is taken from you, because every relapse you are punished for hoping."

Solutions

Prevention/Education

Prevention/education was cited twice as often as any other solution as a key strategy in having an impact on the heroin problem. There was an overwhelming consensus across all groups that prevention/education efforts needed to be a priority in any comprehensive plan. The general theme was that there needs to be much more prevention programming that starts before the beginning of middle school. The prevention efforts need to be wide ranging and effective, and there needs to be increased funding. The number of specific suggestions for solutions was so numerous, that they needed to be divided into subcategories that included general education, prevention programs, parenting focused efforts, and community education/involvement. Suggestions for solutions in each category included:

General Education

- Accurate, age appropriate information on drug effects
- Legal consequences of drug use
- Signs and symptoms of abuse

Prevention Programs

- School based programming
- Mentoring
- Coping skills
- Healthy alternatives
- Media messages on the negative impact of drugs
- Positive peer influence programs
- How to get connected with others
- Communication skills

Parent Focused Efforts

- Parenting skills education
- Parent involvement with their children
- Family communication
- Parent child relationships
- Awareness education on signs and symptoms
- Awareness education on the extent of the heroin problem
- Awareness education on legal consequences

Community Education/Involvement

- Awareness education on the scope of the problem
- Community-wide involvement in prevention efforts
- Promotion and involvement in church activities
- Open communication and discussion on the extent of the problem

Substance Abuse Treatment

The second most mentioned solution concerned substance abuse treatment. The consensus across all groups was there needs to be more treatment programs available, and they need to be more effective. There was strong sentiment that recent cuts have contributed to an increase in the problem. A number of specific suggestions for solutions were mentioned and included:

- More detox, outpatient, and inpatient programs
- Additional services
- More 12 step programs
- More faith-based treatment programs
- More effective ways to treat heroin addiction
- Separate, focused treatment programs for heroin addiction

Laws/Legislation

The third most mentioned category of solutions was laws/legislation. The consensus was that more could be done to effectively deal with the heroin problem by enacting new laws or legislation. One theme was that there needed to be stiffer penalties earlier in the addiction process. These stiffer penalties for the user were characterized as mandating treatment much earlier and not waiting until heroin is the primary drug of choice. Much stiffer penalties were recommended for drug dealers, but not necessarily the petty dealer that is a really a user trying to defray the cost of his/her own supply. The control of needle sales was suggested. Currently, young people can buy needles cheaply and without restriction. It was felt this contributes to the injection of heroin and feeds into the decreased stigma of heroin use and specifically the use of needles. It was cited by multiple focus groups that there needs to be legislation that mandates schools and communities to report to the media heroin overdoses and deaths. It was felt that this information tends to be suppressed which contributes to a lack of community awareness of the extent of the heroin problem. A number of times it was mentioned that laws need to be changed in order to more easily allow drug testing of all students in schools. An innovative suggestion was that all drug overdose deaths be investigated as homicides. This would allow investigations to continue to the source of the drug and penalties for those individuals would be to the level of a homicide. One other innovative solution related to laws/legislation had to do with mandated reporting. Currently, teachers are mandated to report incidents of child abuse. The suggestion was that teachers should be mandated to report occurrences of student substance use.

Law Enforcement

The next most cited category of solutions was law enforcement. In general, a number of groups cited that there needs to be more focus and resources directed toward the problem of substance abuse in communities. One suggestion mentioned by some of the focus groups was that police need to be better at policing the drug dealers. It appears that there are areas or houses where drug dealing occurs. There should be more law enforcement resources and efforts to crack down on these known locations where drug dealing takes place. Another solution was for more community involvement with local police. Efforts to work together to deal with the heroin problem would increase the effectiveness of law enforcement.

Recovery/Support

The next most mentioned category of solutions was in the area of recovery/support. Overall, the sentiment was that there needs to be more support groups in schools and throughout the community. There also needs to be more community resources geared towards those in need of recovery/support. More 12 step and faith-based recovery/support programs need to be widely available and promoted.

Early Intervention

Although early intervention was mentioned the least as a solution category, when it was discussed, it was viewed as critically important to a comprehensive plan to address the heroin problem. The early intervention suggestions were primarily focused on efforts by schools to identify students using substances as early as possible. To a lesser extent, education on signs and symptoms for parents would be helpful in the early identification of youth substance abuse. A number of focus groups expressed that schools need to put more emphasis on the early identification of substance abuse by students. The youth focus group summarized this perspective by characterizing the schools as having their priorities all wrong. It was stated that less emphasis needs to be placed on cell phone usage and dietary concerns, and much more of a priority placed on identifying and dealing with students coming to school high. As part of an early intervention strategy, the suggestion was not to focus on expulsion or punishment, but instead, on efforts to get the student help in terms of treatment or recovery/support programs.

Conclusion

The purpose of this project was to listen to the voices of people from a variety of sectors from the communities in Will County in order to develop a comprehensive plan to address the devastating impact heroin is having on individuals and families. It is hoped that this report not only helps to clarify the scope of the problem, but points to ways that everyone can begin to work together in a strategic way so that we can say... "Parents, don't lose hope".

Center for Prevention Research and Development (CPRD) University of Illinois

Strategies to Avoid

Prevention programs should avoid the following components (Drug Strategies, 1999):

- Scare tactics and moralistic appeals.
- Curricula that rely solely on information about drugs and their dangers. When used alone, knowledge-oriented interventions designed to supply information about the negative consequences of substance use do not produce measurable and long-lasting changes in substance use-related behaviors or attitudes and are considered among the least effective educational strategies (Tobler & Stratton, 1997).
- Curricula that only work to promote self-esteem and emotional well being, rather than providing training that promotes self confidence in resistance skills (otherwise known as self-efficacy).
- “Single shot” assemblies and presentations.
- Testimonials by former addicts, because they reinforce a negative norm that “everyone uses drugs” at some point in their lives.
- For the selected youth population, grouping these youth together in early adolescence may inadvertently reinforce problem behavior (Williams, 2003; Dishion et al., 1999). In one follow-up study after prevention programming, at-risk youth grouped with peers were actually exhibiting more problem behaviors than those who had not been grouped with peers (Dishion et al., 1999).
- Similarly, a rigorous study on group school counseling showed that it in fact led to increased drug use; this effect, whereby an intervention has harmful effects, is called “iatrogenic” (Hallfors & Van Dorn, 2002).

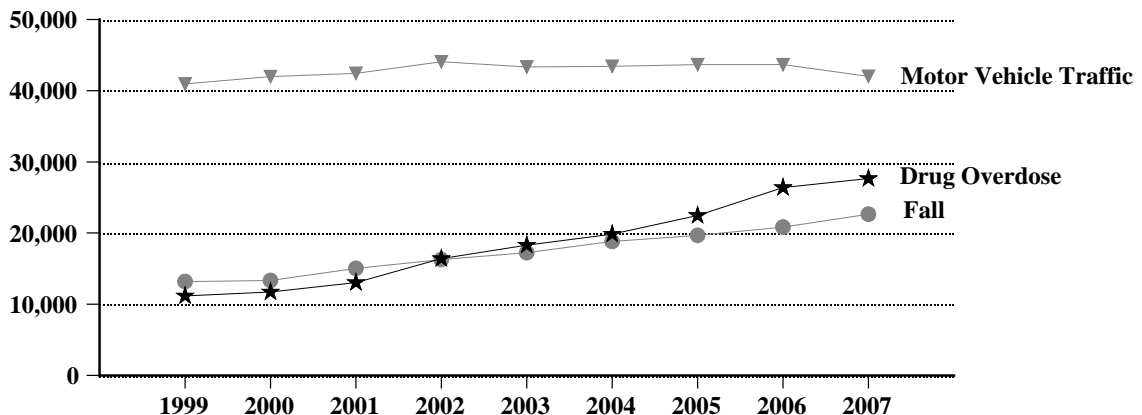
A Weekly FAX from the Center for Substance Abuse Research

University of Maryland, College Park

Unintentional Drug Overdose Deaths Continue to Increase; Now Second Leading Cause of Unintentional Deaths

While motor vehicle traffic accidents continue to be the leading cause of unintentional deaths in the United States (comprising 42,031 or 34% of all such deaths in 2007), drug overdose deaths have been rapidly increasing. According to the Centers for Disease Control and Prevention, there were 27,658 unintentional drug overdose deaths in 2007, more than double the 11,155 deaths in 1999. Drug overdose deaths now account for 24% of all unintentional deaths and surpass falls as the second leading cause of unintentional deaths. Unintentional drug overdoses include those resulting from illegal, prescription, and over-the-counter drug misuse, abuse, taking too much for medical reasons, and accidental ingestion (such as by a toddler). The most common drug categories involved in drug overdose deaths are prescription opioids, cocaine and heroin.

**Number of Deaths from Unintentional Injuries in the United States,
by Top Three Causes, 1999-2007**



NOTES: Motor-vehicle traffic deaths include pedestrians, pedal cyclists, or occupants, and involve any type of motor vehicle on public roads.

Drug overdose deaths include accidental poisoning by and exposure to narcotics, hallucinogens, antiepileptics, sedative-hypnotics, antiparkinsonisms, psychotropics, nonopioid analgesics, antipyretics, antirheumatics, other drugs acting on the autonomic nervous system, and other and unspecified drugs, medicaments, and biological substances (ICD-10 codes X40-X44).

Mortality data prior to 1999 cannot be compared with data from 1999 and after due to significant changes in the coding of mortality data in 1999.

SOURCE: Adapted by CESAR from Centers for Disease Control and Prevention (CDC), National Center for Injury Prevention and Control (NCIPC), *Unintentional Drug Poisoning in the United States*, 2010 (available online at <http://www.cdc.gov/HomeandRecreationalSafety/pdf/poison-issue-brief.pdf>); and CDC, NCIPC, Web-based Injury Statistics Query and Reporting System (WISQARS), accessed 5/17/2011 (available online at <http://www.cdc.gov/ncipc/WISQARS>).

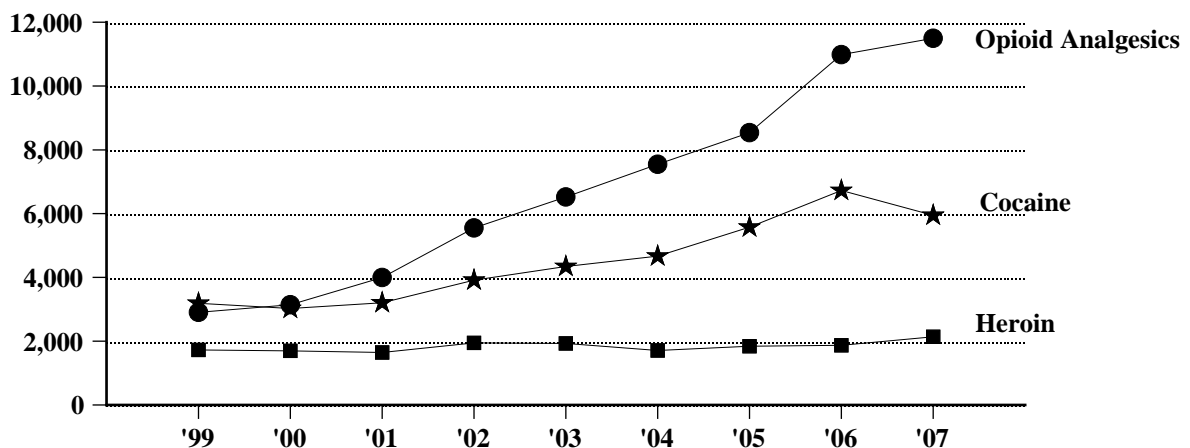
A Weekly FAX from the Center for Substance Abuse Research

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Number of Unintentional Opioid Analgesics Overdose Deaths Increases Fourfold Since 1999; Responsible for More Than Cocaine and Heroin Combined

The number of opioid analgesic deaths in the United States has nearly quadrupled over the past decade, according to data from the CDC's National Vital Statistics System. There were 2,901 unintentional drug deaths involving opioid analgesics¹ in 1999, compared to 11,499 in 2007 (the most recent year for which data are available). There were nearly twice as many deaths in 2007 involving opioid analgesics than deaths involving cocaine, and more than five times as many than those involving heroin. In fact, opioid analgesics have been responsible for more unintentional drug overdose deaths in the United States than cocaine and heroin combined since 2003. Unintentional drug overdoses deaths are the second leading cause of all unintentional deaths in the U.S., after motor vehicle-related deaths (see *CESAR FAX*, Volume 20, Issue 19).

Number of U.S. Unintentional Drug Overdose Deaths by Top Three Causes, 1999-2007



¹Opioid analgesics are categorized as methadone (ICD-10 code T40.3), other opioids (T40.2), and other synthetic narcotics (T40.4).

SOURCES: Adapted by CESAR from Paulozzi, L.J., Weisler, R.H., and Patkar, A.A., "A National Epidemic of Unintentional Prescription Opioid Overdose Deaths: How Physicians Can Help Control It," *Journal of Clinical Psychiatry*, published online ahead of print, April 19, 2011; and Centers for Disease Control and Prevention, personal communication, 5/20/2011.

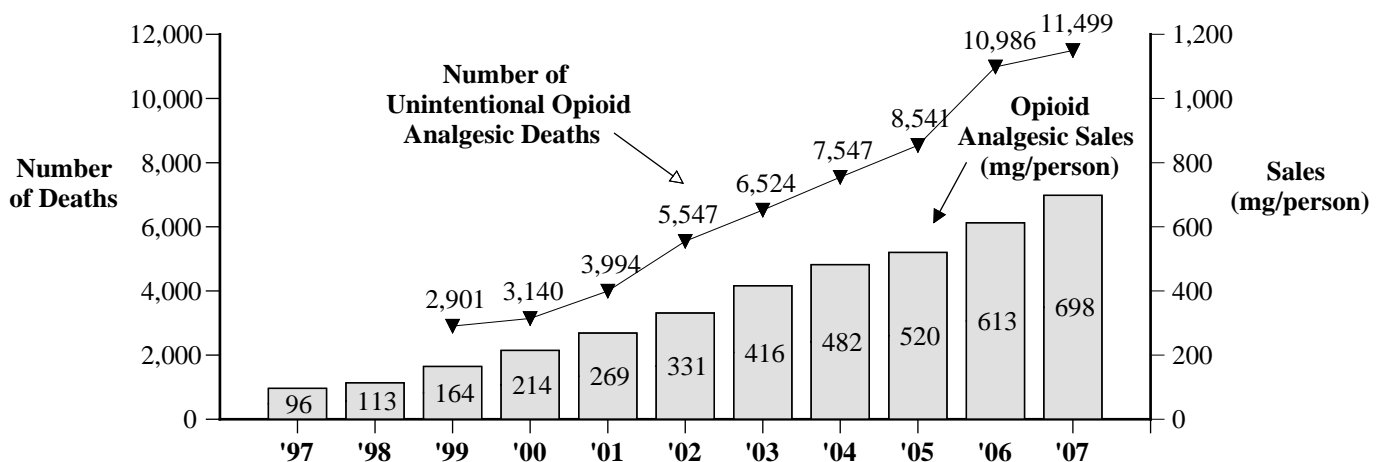
A Weekly FAX from the Center for Substance Abuse Research

University of Maryland, College Park

Increases in Unintentional Overdose Deaths Involving Opioid Analgesics Mirror Rise in Per Capita Sales of These Drugs

Sales of opioid analgesics, such as oxycodone and hydrocodone, have increased more than 600% since 1997, according to data from the Drug Enforcement Administration (DEA). Opioid analgesic sales increased from 96 milligrams per person in 1997 to 698 milligrams per person in 2007. During the same time period, the number of unintentional deaths involving opioid analgesics quadrupled, from 2,901 in 1999 to 11,499 in 2007 (the most recent year for which data are available). The increase in deaths and sales are highly correlated ($r=0.99$), supporting previous research¹ showing a strong, statistically significant correlation between states with the highest drug-poisoning mortality rates and states with the highest overall per capita sales of opioid analgesics. These findings suggest that the increased sales of opioid analgesics over the past decade may have inadvertently contributed to increases in opioid analgesic overdose deaths.

**Number of Unintentional Overdose Deaths Involving Opioid Analgesics and
Per Capita Sales of Opioid Analgesics (in Morphine Equivalents),
United States, 1997 to 2007**



¹Paulozzi, L.G., and Ryan, G.W., "Opioid Analgesics and Rates of Fatal Drug Poisoning in the United States," *American Journal of Preventive Medicine* 31(6):506-511, 2006.

NOTES: Sales data are from the DEA's Automated Reports and Consolidated Orders System (ARCOS), which requires manufacturers and distributors to report the number of grams of each monitored substance distributed to pharmacies, practitioners, hospitals, teaching institutions, and narcotics treatment programs. The amounts of each opioid analgesic drug were converted into morphine equivalents. Death data are from the CDC's National Vital Statistics System (NVSS), multiple causes of death dataset.

SOURCES: Adapted by CESAR from Paulozzi, L.J., Weisler, R.H., and Patkar, A.A., "A National Epidemic of Unintentional Prescription Opioid Overdose Deaths: How Physicians Can Help Control It," [published online ahead of print April 19, 2011], *Journal of Clinical Psychiatry*, 2011; and Baldwin, G. and Paulozzi, L.J., *The Epidemic of Prescription Drug Overdoses*, PowerPoint presentation provided by NCIPC, 5/23/2011.

June 15, 2011

[From the New York Times]

Drug Is Harder to Abuse, but Users Persevere

By **ABBY GOODNOUGH** and **KATIE ZEZIMA**

BROCKTON, Mass. — Michael Capece had been snorting OxyContin for five years when a new version of the drug, intended to deter such abuse, hit the market last summer. The reformulated pills are harder to crush, turning instead into a gummy substance that cannot be easily snorted, injected or chewed.

Instructed by his dealer, Mr. Capece, 21, tried microwaving one of the new pills, then sniffing up the burnt remains. Other addicts have tried to defeat the new formula by freezing, baking or soaking the pills in solvents ranging from soda to acetone. Many are ending up frustrated.

“It’s too much work,” said Mr. Capece who entered a rehab program here last month. “It wasn’t anything I enjoyed.”

A powerful narcotic meant for cancer patients and others with searing pain, OxyContin is designed to slowly release its active ingredient, oxycodone, over 12 hours. But after it was introduced in 1996, drug abusers quickly discovered that chewing an OxyContin tablet — or crushing one and snorting the powder, or injecting it with a needle — produced an instant high as powerful as heroin. It has been blamed for waves of addiction that have ravaged certain regions of the country, and has been a factor in many overdose deaths.

Purdue Pharma, the maker of OxyContin, may have succeeded for now in reducing illicit demand for its reformulated drug. But in several dozen interviews over the last few months, drug abuse experts, law enforcement officials and addicts said the reformulation had only driven up interest for other narcotics.

Demand appears especially high for pure oxycodone pills that come in a 30-milligram dose, often called “Perc 30s” or “Roxies” on the street. Opana, a time-release painkiller similar to OxyContin that has been on the market for five years, is showing up increasingly in police reports and has been blamed for a rash of overdose deaths. And heroin use has jumped sharply in many regions, according to rehab centers and the police.

“It’s just a matter of switching,” said John Burke, commander of the drug task force in Warren County, Ohio, and president of the National Association of Drug Diversion Investigators. “If I’m an addict, I’m going to find a drug that works.”

Mr. Burke said abuse of other oxycodone drugs was already growing before OxyContin was reformulated last August, partly because the other drugs are cheaper and because OxyContin had become harder to find on the street. Many doctors had stopped prescribing it because of its stigma and switched to other oxycodone drugs, Mr. Burke said.

Raymond V. Tamasi, president and chief executive of Gosnold on Cape Cod, a treatment center, said he had noticed that addicts switch initially to the Perc 30s.

“But eventually people make that progression from the pills to what appears to be a more economical high, which is heroin,” Mr. Tamasi said.

Prices vary, but 30-milligram oxycodone tablets generally sell on the street for \$20 to \$30 each, according to addicts and law enforcement officials. The old OxyContin sold for as much as \$80 per 80-milligram pill. Several recovering addicts in Massachusetts said an 80-milligram tablet of the reformulated version, called OxyContin OP, costs about \$40.

“You don’t make any money selling the OPs,” said James Moore, 28, who said he stopped selling and snorting OxyContin and moved on to heroin after the new version came out last year.

Mr. Moore, who said he used to snort as many as 10 OxyContin pills daily, was arrested in November for selling heroin and now lives at a halfway house in East Boston. Addicts can still get high from swallowing the new OxyContin pills, he said, but most prefer the immediate rush delivered by snorting or injecting the powder.

Outside of OxyContin, which comes in doses as high as 80 milligrams, the 30-milligram dose is the highest available for oxycodone, which is why addicts covet it.

Some addicts are reporting an even more powerful high from Opana, a time-release opiate painkiller whose active ingredient is oxymorphone. In Louisville, Ky., there have been at least 14 deaths this year involving Opana, according to the Jefferson County coroner's office.

Purdue Pharma should have reformulated OxyContin sooner, said Steven Tolman, a state senator in Massachusetts who led a commission that investigated OxyContin abuse. The company asked the Food and Drug Administration to approve the new version for sale in November 2007; it won the approval in April 2010. It is the first painkiller reformulated to deter abuse, according to the F.D.A., which is now studying several proposed reformulations of other opiate drugs.

"It should not clear their conscience," Mr. Tolman said of the change. "These people are scientists. Why didn't they do this years ago?"

Not everyone is convinced that the days of abusing OxyContin are over. The F.D.A. is requiring Purdue Pharma to conduct clinical trials before it can claim that the new version is less abuse-prone. Though many addicts appear frustrated by the reformulation, Dr. Mark Publicker, an addiction medicine specialist at Mercy Recovery Center in Westbrook, Me., said he was "absolutely certain" that people would figure out how to abuse the new OxyContin.

"I like to think of them as drug addict scientists in white lab coats," he said, pointing to Web sites where drug abusers debate various ways of trying to defeat the new formulation.

Libby Holman, a Purdue Pharma spokeswoman, said that based on initial data and reports, the company is "cautiously optimistic" that the reformulation will eventually prove less susceptible to abuse. But long-term studies will be necessary, she said in an e-mail, adding, "It is still too early to make any conclusions about the product's impact on abuse and misuse in real-world settings."

The company has initiated eight epidemiological studies and will report updates to the F.D.A., which approved their design, Ms. Holman said. Meanwhile, the new OxyContin pills have won some unflattering nicknames, said Dr. Ronald Bugaoan, director of psychiatric services at the High Point Treatment Center in Brockton.

“They call them gummies because when you chew them up they get stuck between your teeth,” he said. “They call them jellynoses because when you try to snort it up they get stuck. They cake in the nose.”

Mr. Moore, the recovering addict in East Boston, said that it was possible to snort the new OxyContin but that it took about an hour to break it down.

“It’s like doing a science project,” he said, “sitting there with a scraper, a knife, a razor blade, like it’s a frog or something.”

What Should Youth be Taught About Drug Abuse?

Those who have a single best answer to the title question can do much unintended damage, as has been done in the past. My opinion, based on prevention research and my experience in prevention, is that the correct answer depends on the audience. Different youth have different needs.

Youth who are already regularly using one or more substances (alcohol or other drugs) need information specifically matched to their circumstances. These youth need to know that the person speaking to them knows them, rather than speaking solely out of any general approach to the topic of drug use. The ideal setting is in substance abuse treatment, but in the absence of that, the “information” most needed is probably a sincere statement of concern for whatever dangers the person is facing. Those dangers should not be minimized nor exaggerated.

In some cases, in which a young person is headed into more use of more drugs, there may need to be advice about specific risks and what the young person can do to lessen those risks. If this kind of “harm reduction” is attempted, it should be considered a short-term measure designed to decrease risk of death or serious injury so that recovery is possible, with drug abstinence as the ultimate goal. Even as a short-term approach to someone already in significant risk of injury from regular substance use, a “harm reduction” approach carries risk of facilitating worsening of substance abuse, even to the point of death. Does teaching about disinfecting a syringe help or hurt? If the person in question already uses injection drugs with no attempt to disinfect, perhaps it helps, especially as part of gradual encouragement toward seeking treatment and recovery. If the person has thought about using a syringe but has been fearful of the effects, a lesson in syringe cleaning to reduce harm could be what lowers fear and starts use of injection drugs, which raises the likelihood of death. In general, promoting the idea that “safer” use is possible should never obscure the fact that risk is not eliminated as long as drugs are used.

On the other end of the spectrum, youth who have not used any substance and who do not have significant personal risk factors for substance use (such as child abuse or severe neglect as an infant) need a very different approach. The main risk factor for non-using youth to initiate use is social influence toward use, along with substance availability. They most need to know that drug use (including binge drinking or underage drinking) is not a necessary or desirable part of growing up. They need to know that (in most cases) the number of peers who use a substance is less than they think. The worst message this young person can get is that “everyone does it” or that drinking or using other drugs is expected of teens. While it can be acceptable to teach these youth some facts about drugs:

(1) Don't expect drug education to make them less likely to use a substance. Some forms of preventive education, such as “social norming” and media literacy, can somewhat lower use rates, but facts about drugs will tend to either have no effect or increase use. Drug education can increase use among non-using youth when it normalizes use, and especially if it teaches about how to use.

(2) Direct drug education to these youth is probably not as important as drug prevention education given to their parents. While some parents make matters worse due to their

own substance abuse, most parents are not the cause of youth risk as much as they are missing opportunities to prevent use. Parents can greatly lower the likelihood of their pre-teen or teen drinking or using other drugs when those parents attempt to pro-actively understand and counter any popular ideas or practices that make alcohol accessible to youth or that imply that youth alcohol or other drug use is acceptable or desirable. Parents who have rules against youth substance use, clearly convey disapproval of such use, and actively monitor their teen's activities to veto exposure to alcohol or other drugs can substantially cut the risk of their son or daughter drinking, binge drinking, or using marijuana.

(3) Even with parents' best efforts, sometimes the influences of a pro-substance use culture locally and/or via national media can lead to initiation of substance use by a youth with no great risk factors other than exposure to that culture along with opportunity to start use.

Youth who haven't begun regular use of alcohol or other drugs but who have one or more significant risk factors for use can be considered a third group in circumstances that pertain to drug prevention. Youth who come from a childhood in which they experienced "profound challenges", as described in "Comprehensive Theory of Substance Abuse Prevention" need some of the same protection from social influence as other non-using youth, but probably also need exposure to "positive youth development" efforts, and/or social services specific to the particular factors that put them at higher risk of substance use, substance abuse, and many other problem behaviors. As with all other youth, drug education has very little chance of success unless the other factors (social influence and/or individual risk factors) are also addressed.

It is not unreasonable to expect that some youth can use facts to help them make good decisions, but research and experience in drug prevention indicate that youth who use that kind of decision making process are in most cases already at lower risk of substance use than peers who fail to use such logic. Also, the circumstances of teens' lives today can make use of alcohol or other gateway substances seem very logical. If you hear contradictory things about the dangers of alcohol or other drugs, but you observe that many of your peers are using them and are not getting hurt (in fact, are coming back to use more of a substance), then it is logical to reject cautions against use as expressions of ungrounded fearfulness or adult worry.

The bottom line is that:

1. Words against youth substance use do not have a profound impact without adult actions against youth use.
2. Drug education directed toward youth has much less power than drug prevention education directed toward parents and other adults regarding youth substance use.
3. Particularly in regard to youth, drug education can actually do harm if the methods and content are not chosen to match the particular audience, in terms of drug experience and presence or absence of individual risk factors.

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Comprehensive Theory of Substance Abuse Prevention

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Introduction

There are so many ways of looking at substance abuse and substance abuse prevention that a clear view of the relation of all parts to a coherent whole is very hard to attain. Typically each person has familiarity with one or two segments of the issue, at best, and generalizes from their limited experience in conjunction with their overall belief system.

In order to make effective plans for prevention, a better understanding is needed. In order to judge the merits of any particular proposed policy or strategy, one should have some idea of not only the likely result but also the alternatives and the comparative effects of each.

This paper is a proposed model for understanding substance abuse and substance abuse prevention, in search of the “big picture”. Its goal is not to capture every detail of the very complex set of facts and issues involved, but to lay out enough of an overview so that a framework exists for connecting and reconciling beliefs and research findings that may sometimes seem contradictory, or at least not clearly related. It is based on the author’s multi-decade search for such understanding while working on various aspects of substance abuse prevention. It is intended to be consistent with all valid research findings, but to also draw from the experiences of many people who have been involved in prevention. It applies most directly to dynamics and trends in the United States of America, but some of the concepts seem to generalize to many other countries.

Overview

The theory is based on the following points, each discussed below:

1. Substance abuse prevention is largely about what happens in the first twenty years of life. This includes large scale social environment issues as well as less widely experienced issues common enough to affect the overall prevalence of substance abuse in a population. One of the most consistent and powerful findings of drug (alcohol and other drug) research is that the younger a person is when they start regular use of a substance, the more likely to have a number of other problems including substance abuse in adulthood, in comparison to young people who don’t drink before age 21 or who don’t drink or use other substances at all.
2. Although most dichotomies are ultimately continuums, the best possible understanding of the development of substance abuse rests on considering two different main routes of risk: profoundly challenged children and socially influenced teens.

3. The preventive actions needed to address each of these main routes is very different, and failure to recognize the differences can lead to frustration and decreased effectiveness in prevention planning.
4. Preventing substance use due to profound childhood challenges is best done by preventing or intervening in the causes of the challenges, while preventing teen use due to social influences involves preventing or intervening in either the messages of influence or substance availability (or both). Teaching youth about drug dangers is not likely to be very effective, compared to interrupting or countering social influence messages (from peers, adults, or media) that promote use.
5. Most principles of primary prevention of youth substance use are relevant to tobacco, alcohol, and marijuana use but not to post-gateway substance use, because the factors influencing progression beyond gateway substance use are as much defined by the effects of currently used substances as by pre-existing factors. In other words, the main feasible way for primary prevention of use of cocaine, methamphetamine, heroin, etc. is to prevent or successfully intervene in youth use of any gateway substance.
6. Parents play an important role in regard to prevention of profound challenges to young children and social influence on teens, but that role is different for one route than the other. The main role of parents in regard to preventing social influences toward alcohol and other drug use among teens is to communicate disapproval of youth substance use, establish family rules against it, and attempt to keep teens out of situations in which peer alcohol or other drug use will occur or is occurring. To prevent profound challenges to children, their parents most of all need to get whatever help they require early in their adult life to avoid establishing a family in which children face fetal effects from alcohol or other drugs, child neglect, child abuse, or other domestic violence. Human service systems that can provide appropriate help to young parents or soon-to-be parents are vital to prevent or intervene in situations that pose a threat to children.
7. When planning prevention initiatives regarding teen substance use, due consideration should be given to whether there are a large number of youth among the population to be served who have experienced profound childhood challenges, or even some more recent challenges. A combination of positive youth development efforts and encouragement of norms against youth substance use may be the best course of action to prevent or delay substance use among youth who have faced such challenges. For youth who have not faced profound challenges to their social-emotional development, efforts specific to countering pro-drug (alcohol and other drug) influences are most needed. Typically, the latter are “universal” prevention strategies, while the programs for teens who have faced profound childhood challenges are “selected” or “indicated”.
8. When large scale trends in youth substance use (such as national prevalence of use over a period of decades) are considered, the predominant power (to affect youth substance use) of adult norms about youth use becomes clearer.
9. Once the overall dynamics of youth substance use and prevention are understood, resolution of various debates about prevention strategy becomes easier, as demonstrated with two examples of issue analysis in the current text.

Profoundly Challenged Children

Children who begin regular use of alcohol or other drugs prior to age 10 are very likely to have faced profound social developmental challenges in their early years. Challenges may start as early as conception, in terms of effects of maternal substance use on a developing fetus. Many of the other profound challenges to capacity for social-emotional functioning occur during the first 2-3 years of life, when children are especially vulnerable to major lapses in care, which threaten their ability to form a solid bond with their parent or other adult caretaker. Other profound challenges in the first ten years can include child abuse, other domestic violence, or other major disruptions in parental functioning.

The meaning of “profoundly challenged” centers on impact of life events and/or early neurologic impairments on a child’s social-emotional functioning. This refers not to intelligence or physical abilities, but the capacity to function socially in some positive manner. Not all children exposed to child neglect, child abuse, or domestic violence will develop early risk for substance use, but such traumas put children at risk for a variety of later behavioral problems, with precocious substance use and substance abuse being among the possible problems. The actual extent to which a child is affected by such events depends on a number of factors, such as personal resiliency factors, the timing and duration of exposure to a destructive environment, and the degree to which parents or other caretakers are able to provide nurturing and emotional healing after the destructive elements are removed from a child’s life. Genetic traits can also play a role, for example putting a child at greater or less risk of later addiction once substance use is initiated.

Even if a child with such challenges in life doesn’t begin regular substance use by age 10, they may remain more at risk for early initiation of use, as well as later substance abuse and other behavioral problems. If they begin regular use of a substance (typically alcohol), they are more at risk than other persons to progress to other substance use, and to have difficulty attaining a stable recovery.

To some extent, the notion of a profoundly challenged childhood influencing later substance use and other behavior is widely recognized. One of the problems of effectively addressing substance abuse prevention is that this notion is insufficient as a sole or main view of the development of substance abuse. A whole other dynamic as youth reach adolescence plays an equally important, though different, role in the incidence of youth substance use and abuse. Importantly, though at-risk children may remain at-risk in adolescence, any other young person may become “at-risk” in adolescence through this very different dynamic of causation. No one is absolutely immune.

Socially Influenced Teens

Any person can be influenced to some extent by the words and actions of others, or even the perceived attitude of others. For teens in general, this is especially true, as the prime

developmental task of adolescence is to recognize and shape one's own identity. As young people enter teen years and move through those years, they are becoming more independent from their parents. Parents still have very important roles to play, but can't be with their adolescent children all the time, and have to compete for teens' attention as young people increase attention to the views of peers and popular culture. As a result of teens' independence and increased attention to messages they perceive around them, many of them that hadn't used substances previously are exposed to alcohol and other substances, and choose to take a drink or a smoke or a pill to see what it feels like or to fulfill role expectations that they perceive, either accurately or not. Some don't continue use, but others begin regular use of a substance, particularly alcohol. Most or all sets of youth survey data from anywhere in the world show a significant increase in the prevalence of substance use as a cohort of young people moves from young teen years to their older teens and young twenties. Some substances, particularly inhalants, reach their greatest prevalence prior to age 16, and some substances, such as heroin, are rarely used before older teen years or later. However, the prevalence of ongoing alcohol, tobacco, and marijuana use tends to increase with age throughout adolescence. "Recreational" use of prescription drugs also follows that pattern, though it is still not as prevalent as marijuana, which in turn is still not as prevalent as regular alcohol use among teens.

For most teens, the increase in risk of use is based not so much on adverse life events, past or present, but on easier access to substances and a perception that drinking or other substance use is expected or normal for teens. Some of the connection between such norms ("descriptive" norms and also "injunctive" norms) and substance use is due to substance-using students seeking peers who also drink and use other drugs and who serve as their reference group for normal behavior, but much of the connection between perceived norms and substance use is due to the impact of pro-use messages on risk of use. These messages can come from peers, parents, other adults, and from media. So, while individual risks from a "profoundly challenged childhood" usually apply to a whole range of potential problems and often require a variety of individual and family interventions to prevent or reverse, the risks from social influences may be very specific to alcohol or other drugs and require preventive initiatives that are very focused on the use of particular substances, or at least on the issue of use of substances to get intoxicated (stoned, high, drunk, etc.).

Understanding the relative power of perceived peer norms helps understand why drug education hasn't succeeded as a key societal answer to substance use. For many years, persons familiar with substance abuse prevention research have known that "drug education" is not a powerful way to prevent youth use of substances. School prevention curricula can range from very helpful (addressing elements such as "media literacy" and revision of perceptions of peer use) to counter-productive (unintentionally reinforcing perceptions that most youth use substances, or even showing how to use), but simple education about the effects of drugs tends to produce no effect. Understanding why is best approached from two perspectives, the first concentrating on facts about "gateway" drugs: alcohol, marijuana, tobacco, and inhalants.

These four substances can be considered “gateway” because young people who begin regular use of a substance for the first time in their life will almost always do so with one of these four. Sometimes only one gateway substance (especially alcohol) is used by a young person, but often two or more are eventually used. Gateway substances tend to be ones that are relatively available and widely used. Teens who haven’t begun regular use of a substance are likely to know peers who use one or more of the gateway drugs. Therefore, any facts taught or told to young people about dangerous effects of any of the gateway drugs are very likely to be tested by perceptions about youth who use them. Unless a particular fact about a danger of a specific gateway drug is validated by being somewhat common and observable among teen users, it may easily be dismissed as adult hyperbole, rather than a fact about probabilities of damage. This is particularly true for cumulative dangers such as addiction or liver disease, as teens can choose to believe not only that those will never happen to them but also that there will be plenty of time to perceive such dangers and avoid them.

Since the power of taught (but not observed) facts about gateway drug dangers to affect youth behavior is weak, drug education and media communication efforts aimed at teens are unlikely to have much positive effect unless they instead focus on the more powerful dynamic of social influence. Examples include messages that correct the usually mistaken impression that most peers use a substance, messages that debunk pro-drug media messages (typically by building teens’ “media literacy”), and messages that in any other ways show that teen use of a particular gateway substance is not an inevitable, necessary, or desirable part of growing up.

Drug facts about “post-gateway” drugs such as cocaine, meth, and heroin are also typically ineffective when aimed directly at youth (rather than adults in regard to youth), but the main reason for this is different from the dynamic discussed for gateway substances. Analysis of prevention of post-gateway substance use must be heavily driven by recognition of the characteristics that distinguish those who engage in such use, particularly the extent and effects of their previous experiences with gateway substances.

Progression to Other Substance Use and to Other Problem Behaviors

When either main route (Profound Childhood Challenges and Social Influences on Teens) toward youth substance results in initiation of regular use, it is almost always use of one the gateway substances. Only after regular use of one or more of these substances has begun does the likelihood for use of other illicit drugs (such as cocaine, LSD, methamphetamine, or heroin) or of prescription drugs for “recreational” purposes begin to grow. The question of which substances beyond any one person’s “gateway” substance(s) will be used seems to depend mainly on what drugs are available and popular in that community at that time. In other words, once a teen or young adult becomes part of the pool of those who regularly use one or more substances for psychoactive effect, they are at heightened risk for other substance use and abuse. The heightening of risk of other drug use (sooner or later) among youth who use a gateway substance doesn’t necessarily mean that a very high percentage of drinkers or marijuana

users go on to using other drugs, but that the risk of a young person starting use of any other drug before they regularly use one or more gateway drugs is very close to zero.

In essence, the only way to achieve true “primary prevention” of use of post-gateway substances is to succeed at preventing or stopping use of “gateway” substances, particularly alcohol and marijuana. Media campaigns against a specific drug (other than alcohol, tobacco, marijuana, or inhalants) such as heroin or methamphetamine may succeed only in diverting use from one dangerous substance to others, if there is any success at all. Worse, there is some likelihood that a media campaign against a particular post-gateway drug like methamphetamine or heroin may actually increase use. To understand why, one must think about the effects of the message on two different groups: those who are already regular users of at least one gateway substance (typically alcohol) and those who have occasional (less than monthly) or no use of any substance. The latter group is very unlikely to start use of a post-gateway drug (methamphetamine, for instance) in the foreseeable future, so a media campaign about dangers of meth use would have no effect on their substance use. The group who regularly use at least one substance, however, includes some proportion whose interest is in what other substances to use in search of a better “high” than they have already experienced. To such a person, an anti-meth campaign focusing on the negative effects of the drug can act like an advertisement that says, “If you think you’re already getting powerful effects from what you’re taking now, just imagine the high that people find when they risk using this dangerous drug.” Others in the group of users, who are not so driven by risk taking and the search for a new high may be warned away from meth, but are not likely to stop use of other substances they use, nor to avoid trying some other drug. So, funding that could have been used for media campaigns against gateway substances or for treatment of persons who are abusing any drugs goes instead for less effective or counter-productive uses if aimed toward warning about specific drug dangers.

Once any young person starts to regularly use one or more substances, they increase their risk of substance-related problems, ranging from DUI car crashes to unintended pregnancy, and from involvement in violence to development of drug dependency. Depending on the nature (frequency, duration, circumstances, etc.) of their use, the increase in risk may be slight, moderate, or extreme. Extreme risk can be present even if the person only uses alcohol or marijuana, but use of multiple substances further increases risk.

The Special Roles of Parents

Parents can play an important role in regard to either kind of risk, but the specifics of their role tends to be very different in regard to profound childhood challenges than to social influence of teens. The first and foremost action parents can take to prevent the development of risk due to profound challenges to youngsters is to avoid being part of the problem. In other words, parents who avoid substance use themselves during pregnancy and avoid substance abuse at all times, and who ensure a safe and nurturing family environment for their children’s early years are being the best single resource for

lowering risk of their children later using substances, as well as other problem behaviors. Beyond that, parents or other caretakers can proactively seek appropriate social and psychological services when needed for themselves and/or a child for whom they are responsible. The best prevention approach in regard to profound challenges in childhood is the combination of those kind of positive parenting efforts and the availability of needed social services to help parents (birth parents, foster parents, adoptive parents, guardians, etc.) of young children cope with major life problems. The earlier in life these are addressed, the better. Efforts specific to drug prevention have little relation to the services needed, except to the extent that substance abuse prevention and/or treatment for parents (before or after they become parents) can decrease or prevent parental substance abuse and fetal alcohol or other drug exposure.

The role of parents in reducing social influences toward drinking or other drug use among teens is different. Parents still need to try to avoid becoming part of the problem (e.g. to not provide alcohol to youth), but beyond that the greatest need is for parents to attempt to pro-actively understand and counter any popular ideas or practices that make alcohol accessible to youth or that imply that youth alcohol or other drug use is acceptable or desirable. Parents who have rules against youth substance use, clearly convey disapproval of such use, and actively monitor their teen's activities to veto exposure to alcohol or other drugs can substantially cut the risk of their son or daughter drinking, binge drinking, or using marijuana.

Parents (or other family members) can also act as advocates beyond their family for public policies that decrease youth access to substances or that in other ways lead to less substance use by youth in their community.

Applying This Theory to Prevention Planning

To the extent that this theory accurately represents the major routes toward substance use and substance abuse, understanding it can help resolve debates about how to best prevent use.

People (preventionists, parents, public officials, etc.) who understand the “profoundly challenged childhood” route but not the “socially influenced teens” route tend to favor use of social services and positive youth development models to support youth in basic ways that may decrease risk for multiple youth problems, including substance use. The earlier in the development of the predisposing conditions in childhood interventions can be engaged and effective, the more likely they are to achieve success at relatively low cost, especially in comparison to no prevention efforts. From this perspective, efforts such as media campaigns against gateway substance use may appear to be unlikely to have much impact. Similarly, efforts to rally public opposition to substance use are seen as ineffective at best, and perhaps insensitive to the extent that they may embody “blaming the victim.” Parents or other adults who believe that only troubled youth are at risk may underestimate the need to apply anti-drinking or anti-marijuana rules and expectations to all youth.

On the other hand, people who understand the “socially influenced teen” route but not the “profoundly challenged childhood” route may advocate preventative sanctions against youth use that, if not combined with intervention services as needed, are both ineffective and provocative toward youth who come from profoundly challenged childhoods. Unless prevention planning discussions include due understanding of the two different routes, persons with different points of view of how substance use and abuse develops may become locked in debate for one view or the other, rather than respecting both views in discussions about prevention.

Any particular initiative may be designed to affect just one of the two routes as long as the initiative is designed with understanding of the limits of each prevention approach in light of the larger picture. In fact, the goals and strategies needed for each of the two main routes often are too different to be combined. The most cost-efficient way to prevent drinking or other drug use caused by profound challenges in childhood is to prevent those challenges from occurring. The most cost-effective ways to prevent substance use among the general population of teens are policies and messages that focus specifically on youth substance use issues. Initiatives to counter the effects of social influence toward use often need to be very substance-specific, with separate messages or separate initiatives for each substance: alcohol, tobacco, marijuana, and inhalants.

Rather than substance-focused and belief-focused prevention, work on the prevention of profound challenges to children’s social emotional development depends on a strong array of services for prevention and intervention among young families. Intervention with substance abusing parents can be among the interventions needed, but often parental substance abuse is only one of multiple issues to be overcome in order to decrease risks among children in families that experience profound challenges such as were described above. Effects of these actions on youth use rates generally won’t show up for years, because the young people typically won’t have enough interest in substance use and access to substances for much use to occur before pre-teen years.

Drug prevention efforts toward teens need to be designed with due recognition of the extent to which the particular population of teens includes many who had profound childhood challenges. For example, one can expect a high proportion of teens in the juvenile justice system to have faced profound childhood challenges, but in general youth populations this typically wouldn’t be the case. Teens who experienced profound challenges in childhood (and perhaps also some youth with less profound or more recent major life challenges) typically need a combination of asset (or protective factor) building along with specific messages about alcohol or other drug use, while other teens need only (for purposes of substance abuse prevention) a sufficiently potent combination of protections from social influence toward substance use. In general, this means that most social influence initiatives (including policies against youth access) should use a “universal” model, while other prevention initiatives may often use a “selected” or “indicated” type of program.

Even when a program is designed specifically for teens who had a profoundly challenged childhood, it should include strong standards against youth substance use. Youth who experience profound challenges in childhood will, by being part of the overall population, also be exposed to social influences toward substance use when they are teens. Having both kinds of risks means needing both kinds of prevention. One exception is instances in which successfully overcoming one or more profound challenges of childhood acts as a protective factor against youth use, such as the determination of some youth to avoid alcohol or other drug use based on their experience of growing up in a family in which one or both parents were addicted to alcohol or other drugs. In most cases, though, a mentoring program or other positive youth development initiative for teens that doesn't specifically include a norm against youth substance use will be providing only half of what its clients need to avoid substance use.

Applying This Theory to Interpreting National Trends

For alcohol, tobacco and marijuana, variation in population-wide substance use rates, particularly among older teens, is numerically much more driven by social influence factors than by changes in the number of youth who faced profound challenges in childhood, as defined previously. The upward trends (increased numbers of youth using each of these three substances) as cohorts of youth move through their teens are far too strong to be caused by the relatively fewer number of youth who experienced profound challenges in their childhood. Up and down changes in large communities, in states, and in the nation over a five year period of annual measurement are also not likely to be explainable by changes in the number of children who face such challenges or who resolve them. While any individual may experience profound improvement or worsening of problems in a five year period, the nature of "profound challenges" as described previously makes progress slow on a community-wide level, and also makes major increases in substance use among teens unlikely to be due to their childhood challenges rather than social influence. Only if very large scale decreases in relevant human services have occurred throughout a community, state, or nation would the effects of profound childhood challenges on teens worsen more than average on a year to year basis.

On a national level, therefore, changes over a five year period in the percent of teens using alcohol, tobacco, or marijuana are extremely likely to be due to social influence factors, including substance accessibility to teens, rather than to increases or decreases related to profoundly challenged childhoods.

The question of how to achieve progress in advancing positive social influence regarding youth substance use probably has two different answers, one for short term and one for longer term. To affect use rates in any particular community in less than five years, prevention strategies may target youth substance access policies, youths' perceived peer norms about use, adult norms about youth substance use, strengthening the capacity of teens' parents to be proactive in countering social influences toward substance use, or

some combination of these strategies. Limiting teens' access to substances is crucial, but difficult to accomplish unless supported by strong adult norms against youth use.

In the long run, success at lowering the prevalence of youth use of a substance depends on making mutually reinforcing progress in: (1) strengthening adult beliefs about the importance of opposing youth use of the substance and, (2) development of policies or laws that limit youth access and for which support for enforcement is strong. The more that an adult population recognizes and is concerned about the impact of youth substance use on individuals, families, communities, and economies, the more it will try to communicate an anti-use norm and enforce laws and policies limiting youth access.

Adult norms against youth substance use tend to be eroded by oppositional forces. For each of the main gateway substances (alcohol, tobacco, and marijuana) there are organizations and individuals who are actively promoting adult use or opposing limits on access because of one or more of three motivations:

- (1) Financial gain by those who produce or market the substance,
- (2) Desire to continue use by those who use the substance, and
- (3) Belief that freedom to produce, market, purchase, and use psychoactive substances is a basic human right that is or should be protected by the United States Constitution.

Although oppositional forces don't typically advocate youth substance use, the reasoning or suggestions they offer typically minimize the perception of dangers of a substance, which in turn leads many adults to view heightened concern about youth use as unnecessary.

Adult norms against youth substance use also can be eroded by "generational forgetting". When prevention initiatives have enough success to greatly decrease youth use of a substance, problems stemming from such use that were self-evident during the times of greatest use of the substance may be forgotten as new cohorts of youth move into pre-teen and teen years.

The importance of adult beliefs and practices about youth use of a substance was highlighted in regard to alcohol by the Institute of Medicine's 2004 report, *Reducing Underage Drinking: A Collective Responsibility*. That report and the congressional action following that report have served as indicators of the evolution of adult norms about youth drinking, and also have served as influences toward greater effort by adults to keep alcohol away from teens and reduce youth exposure to pro-drinking messages. Although there are a number of potential contributing factors to the fact that youth alcohol use has declined during the past decade, theoretically the most potent have been the changes in adult beliefs about youth drinking, and associated tightening of policies and laws about youth access to alcohol and about youth alcohol use.

A similar trend can be identified regarding cigarettes. Growing public recognition of the dangers to smokers, dangers to non-smokers who inhale ambient cigarette smoke, and some of the more reprehensible practices of tobacco companies to deceive the public about the dangers led to increasing adult concern and increased governmental action,

culminating in the “master settlement” of late 1998. Substantial decreases in youth smoking have occurred during the past decade as the policies from that settlement were implemented, and the public support for those policies was maintained and perhaps strengthened.

Unlike alcohol and tobacco, which have been widely used in the United States for hundreds of years, the widespread use of marijuana was a phenomenon first seen in the 1960s and 1970s. The theoretical importance of adult norms about youth use of a substance is more challenging to see in rises and falls of national marijuana use rates among youth, but can be found. Key points include: (1) How did the trend toward widespread marijuana use start and increase? (2) What reversed the trend (1980-1992)? (3) What has influenced the percent of youth using marijuana since 1992?

In the context of controversy over the Vietnam war and military draft, the civil rights movement, women’s “liberation,” the “sexual revolution”, and perhaps other powerful issues of the 1960s and 1970’s, a strong, multi-faceted counter-culture emerged among many young adults of the time. The words, “Question Authority” and the saying, “Don’t trust anyone over thirty” characterized the theme of this sub-culture. In some ways the emergence of the counter-culture may have been an appropriate reaction to the times, but the unfortunate inclusion of drug use as a part of that identity for many seems to have been the source of the increased use of marijuana and other drugs. More than any other time since then, and more than any time in the two or three preceding decades, a substantial number of teens and young adults defined themselves by the ideals of the young adult counter-culture rather than the norms of their parents and grandparents. The assertion that the most powerful effect on youth substance use comes from adult norms about youth substance use was perhaps most clearly demonstrated when youth of the 1960’s and 1970’s had to choose WHICH set of adult norms would guide them.

Among the possible reasons why the increase in drug use peaked in 1979 and started to fall were the resolution of some issues that had driven the counter-culture (particularly the Vietnam war), a growing recognition of drug problems, and the efforts of the parent anti-drug movement. All three of these are consistent with the assertion that adult norms about youth substance use are the most powerful drivers of youth use rates, in the long run. With the fading of the counter-culture as a salient part of day-to-day public discourse, the new generation of teens reverted to the norms of mainstream adult culture regarding substance use. In the same cycle that can produce “generational forgetting” when drug use decreases, but opposite to that effect, the rise in drug-related problems led many adults to question their belief in the benign nature of recreational drug use. And, the “Parent Anti-Drug Movement” gave expression to those concerns, advocating strongly not only among parents but in wider public forums about drug policy. The convergence of these three strong cultural changes is sufficient to account for the 1980-1992 reversal of the trend toward greater youth substance use.

Although these three factors achieved a reversal in youth substance use rates, they didn’t completely “undo” the bias toward substance use among the “baby boomer” generation. While substance use and lax attitudes about use followed the more universal pattern of

increasing among an age cohort until they reach their mid-twenties, and then decreasing, the decrease among the baby boomer generation was not enough to blend with previous generations. As a result, that generation has continued to influence adult norms about youth substance use toward a more liberal view, as they influenced later generations and replaced older generations over time. The belief system for legalization of marijuana (and, to some extent, other drugs) over the past thirty years, and the financial power behind the legalization movement, has come largely from baby boomer influence, if not always baby boomers themselves. Apparently, 1992 was the year when the effects of that influence on overall adult norms about substance use in the United States began to overcome the influences that had produced a trend toward decreased youth use in the 1980s. The baby boomers who had turned 18 between 1964 and 1979 were, as of 1992, between 46 and 31 years of age, and had displaced enough of the older generations to erode the strength of adult norms against substance use. Generational forgetting may have helped, but the numbers suggest that the strongest factor was the replacement of older generations by baby boomers, who also, by 1992, accounted for a large number of the parents of teens.

Since 1992, the various factions for and against lax attitudes toward marijuana use have striven against each other in public advocacy, extending the controversy that blossomed in the 1960's and 1970's. The trend of level or slightly decreasing youth marijuana use from 1998 to 2007 and the slight increase in the past three years reflect those struggles.

Applying This Theory to the Analysis of Key Issues in Substance Abuse Prevention

Understanding this theory of how all the “pieces” of substance abuse prevention (particularly the research findings) fit together allows for improved answers to common questions or debates about preventing youth substance use and abuse. For example, here are theory-based analyses of some selected important questions/issues in prevention.

1. Are restrictions against youth access to substances effective, or a waste of time (since motivated youth will get a substance anyway), or even counter-productive (due to a “forbidden fruit” effect)?

Restrictions against youth access to alcohol, tobacco, or marijuana are very effective to the extent that adults in general have enough understanding of the reason for those restrictions or enough trust in policy-makers to stand by the law or policy. “Stand by” means to not be the “weak link” that provides or allows provision of the substance to youth, but also to not give youth the impression that violating the rule would be a trivial matter, free of risk to a young person and those around the substance user. Enactment of a law or policy and enforcement of a law or policy must be done with due consideration of current level of adult belief/support, and how to communicate with the adult population (of the community or state) in a way that increases that support. If a policy fits within the range of public support, is designed to act upon a youth substance access channel that is among the main ones for youth in that place, and is free of problems such as technical details that are impractical to carry out or enforce, it will be successful.

Success in this case doesn't mean that no teen will drink or use the drug again, but that the number of youth users of the substance will decrease. While some youth may continue to find a way to obtain the substance, less devoted users won't bother, and even the youth who make the effort will tend to use less because of the greater effort needed. The notion that young people will exert more effort to get a substance when it is illegal for them than when it is allowed (the "forbidden fruit" effect) may hold true for a few individual youth, but in a community or larger population the effectiveness of an adult-supported policy limiting youth access to a substance is far too great to be reversed by any youth who are exceptions to the general rule of decreased access leading to less use.

2. Are media campaigns about drugs worthwhile, a waste of time, or counter-productive?

Media campaigns must be well constructed in order to be effective, but even a campaign that is carefully crafted can be a waste of time or worse if it is based on erroneous assumptions about youth substance use. Media campaigns that attempt to convey to potential users of specific post-gateway substances some of the dangers of that substance are likely to be ineffective or counter-productive, as discussed previously. Media campaigns aimed at youth that focus on the dangers of gateway drug use may be counter-effective if they greatly exaggerate the dangers of a substance, but otherwise are likely to be ineffective. Media campaigns that focus on one of the gateway substances and convey to youth that use by young people their age is neither typical among peers nor expected by peers may be effective in the short run. Media campaigns that focus on one of the gateway substances and target parents and other adults in regard to use by teens or pre-teens (approximately ages 10-20) may have the greatest chance to have a long-term effect on future youth use rates of the substance, due to the power of adult peer norms and the preventive steps that parents can take. Adults need exposure to messages that effectively convey the importance of supporting laws and policies that limit youth access to substances. Parents need that same kind of message but also need specific encouragement about expressing disapproval of youth substance use, establishing family rules against youth substance use, and monitoring their son's or daughter's activities closely enough to identify and veto their teen's participation in activities that include use of alcohol or other drugs. For the long-term prevention of profound childhood challenges in the next generation of youth, current young adults (young parents and soon-to-be parents) could benefit from media campaigns that decrease fetal exposure to alcohol or other drugs and that promote use of services to prevent or overcome family violence (partner violence and/or child abuse), parental substance abuse, and/or child neglect, especially in the first few years of life.

Conclusion

This version of the proposed theory is comprehensive enough to be examined, discussed, and applied, but can be expected to become more comprehensive in scope, detail, and accuracy as additional issues and facts are connected to it.

“Gateway” Drug Use
Alan Markwood
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There are many different definitions of “gateway drug use”. Some are clearly not true, typically because they are too specific or simplistic. A good example would be to wrongly assert that most youth who use alcohol go on to use marijuana, and then go on to use other drugs. In many youth populations, the majority of youth who regularly use alcohol don’t go on to use of other substances. There is still a remarkably strong gateway effect, in that pre-teens and teens who don’t use alcohol are very unlikely to start use of post-gateway drugs (heroin, meth, or cocaine, for example) so long as they don’t begin to regularly use alcohol. When this is expanded to say that at least one gateway substance is almost always used before any other drugs, it becomes even more universal.

Understanding what’s behind the gateway phenomenon is a vital part of understanding patterns of substance use and abuse. Understanding why certain substances function as gateway drugs helps understand: (1.) The development of substance use and abuse, and; (2.) How and why youth who already regularly use a gateway substance may need a very different type of preventive intervention than youth who don’t regularly use any psychoactive substance.

Development of Substance Use and Abuse

The following is based on the “Comprehensive Theory of Substance Abuse Prevention,” which is available upon request (amarkwood@chestnut.org).

The pattern of rapid increase in percent of youth who use alcohol and other drugs as a cohort of youth move from pre-teen to late teen years is largely driven by social influence and substance availability. Though that is an appropriate focus for discussion of the gateway phenomenon, an important additional dimension to understanding substance use is recognizing that there are some youth who are at heightened risk of substance use and abuse due to “profound childhood challenges” in the first few years of life. Such challenges can occur as early as conception, due to neurological problems from genetic and (prenatal) environmental sources, or from circumstances of young childhood. Quoting from the Comprehensive Theory:

The meaning of “profoundly challenged” centers on impact of life events and/or early neurologic impairments on a child’s social-emotional functioning. This refers not to intelligence or physical abilities, but the capacity to function socially in some positive manner. Not all children exposed to child neglect, child abuse, or domestic violence will develop early risk for substance use, but such traumas put children at risk for a variety of later behavioral problems, with precocious substance use and substance abuse being among the possible problems.

The power of the damage done by profound childhood challenges is substantial enough to be an important exception to the general rule of the pre-eminence of social influence and substance availability as main risk factors toward substance use and abuse. Among the subset comprised of all youth who experienced profound childhood challenges, the problems caused by those challenges can rival social influence as an active risk factor for substance use and abuse. However, among the general population, most youth have not experienced childhood challenges of sufficient magnitude to substantially undermine their ability to function in a social manner. That is why it is appropriate to focus the current discussion, regarding the gateway phenomenon, on the main factors of social influence and substance availability. Those factors powerfully affect all young people, including those who have the additional complication of impaired social functioning from an early age.

Social influence is not synonymous with peer pressure. The subjective experience of social influence is typically not one of being pressured but rather attaining personal insight on what has been missing in one's life, based on what is perceived in the social environment. While social influence can occur at any age, it tends to be most powerful in childhood and adolescence. Early adolescence may feature blatant copying of behaviors based on a clear goal of "fitting in" with one's peers, while later adolescence may be more characterized by individualism in many. In both instances, though, the behavior is part of the central developmental task of adolescence: through some combination of discovery and decisions, establishing one's identity. It is a process of establishing the ways in which one is like others, and ways in which one is different. This is the internal source of the power of social influence as a risk factor for substance use, or a protective factor against use, depending on a young person's social environment, or their perception of that environment.

The question of whether to use alcohol (or any other gateway substance) typically enters the realm of social influence when a young person perceives that many peers or some highly respected peers use that substance. Such perceptions can be heavily based on media portrayals of teens, as well as an adolescent's direct experiences, and can range from accurate to grossly inaccurate. In the vast majority of cases of erroneous perceptions, the error is an overestimate of peer use rather than an underestimate. These overestimates of peer use are one major driver of risk of use.

Over time, young people may perceive not only that peers use, but that they continue to use and appear to suffer no major health or social consequences. Any facts taught or told to young people about dangerous effects of any of the gateway drugs are very likely to be tested by perceptions about youth who use them. Unless a particular fact about a danger of a specific gateway drug is validated by being somewhat common and observable among teen users, it may easily be dismissed as adult hyperbole, rather than a fact about probabilities of damage.

Based on the processes described so far, one can begin to see why some substances function as gateway drugs. In order for the social influence process to lead to substance use, there must be at least one substance that is widely available to youth and that appears to be used by peers without substantial negative effects. If many substances with such characteristics are available, the specific gateway drug(s) used will depend on the relative availability and apparent popularity and safety of the drugs as perceived by each teen or pre-teen.

Once a young person tries using a substance, they begin to be influenced by what they experience when using. The more pleasurable the sensations caused by drug use and the more enjoyable the social interactions that seem to go along with use, the more likely use will continue. The sensations involved are apparently influenced by genetics, as research has established some genetic susceptibility to drug abuse and dependency, and a tendency for those who have such susceptibility to experience more pleasure from use than those who don't share the genetic susceptibility. It is important to note that genetic susceptibility is not required for substance use to continue and become more problematic. Genetic susceptibility can heighten risk, but sustained heavy use can cancel any genetic or other protective advantage that some youth may have at the time of their first use.

Post-Gateway Substance Use and Abuse

Until a young person begins regular use of a gateway substance, they may be susceptible to primary prevention efforts that counter social influence toward use, by some combination of decreasing exposure to pro-use messages and images, increasing exposure to anti-use messages and images, and educating youth on how to analyze and neutralize the impact of messages that imply that youth substance use is widespread and safe. Once a young person starts regular use of a gateway substance, primary prevention efforts based on social influence are likely to be insufficient. Rather than having to depend on perceptions of others' use, the young person who tries drinking or smoking and finds it to be pleasurable and/or relatively safe may continue use mainly based on their own experiences. Their continued use puts them at higher risk for initiating use of other substances. Consideration of why this is the case is important for selection of further prevention or intervention strategies.

As was discussed or implied previously, one explanation for the increased risk is that some proportion of those who begin regular use have other risk factors that contributed to initiation and that also make use of other drugs more likely. However, that is not the only explanation and may not be the main reason for the observed increase in likelihood of other substance use (and of drug dependence and other problems) once a young person is regularly using a gateway substance. Gateway drug use can facilitate other drug use in a variety of ways. (1.) The lack of observed major negative effects on oneself and on peers who are using a substance can seem to validate a young person's perception that trying to get high isn't as dangerous as many adults warn it is. Some youth may recognize that heavy use of a substance or use of more than one substance raises the risk, but other youth may not see this. (2.) Connecting a young person to a peer group that both skews perception of peer norms toward substance use and provides a potential avenue to procurement of illicit drugs can greatly facilitate use. (3.) Depending on the interaction of substance(s) used, user vulnerability, and frequency of use, gateway substance use can impair key aspects of thought involved in decision making about other drug use. Marijuana is particularly suited to this effect due to the combination of its subtle, yet measurable impact on thought and the longer amount of time it remains in a person, compared to drugs that aren't fat-based. (4.) Even if risk is perceived, it can be overtaken by the appeal of repeating a "high", especially to the extent that dependency is developing. The sensation of being high can be extremely motivating, especially to persons more vulnerable to that effect. An extension of this is that in some instances regular use of one substance may chemically "prime" the brain for use of other substances that affect the brain similarly, but this kind of effect seems to be less common than some of the other avenues of gateway effect.

The upshot of all this is that efforts to stop or decrease substance use may need to be different according to whether the youth in question have already started regular use of at least one gateway substance. Although there are some strategies that apply both to non-using and already using segments of the youth population (particularly many regarding substance availability), other strategies may not only be different for the two subpopulations but actually contradictory if applied to the wrong group. Probably the best examples of this potential conflict are strategies that focus on preventive education regarding post-gateway substances. While it is appropriate for some information about post-gateway substances to be part of a school curriculum or preventive education program, any substantial focus on those issues in a class for the general population of youth runs the risk of implying that such substance use is common among teens, and this in turn can engage the mechanism of social influence toward use. The percent of high

school seniors using cocaine, LSD, methamphetamine, or heroin has varied over time, but past year use of each of those substances has never reached 10%, and of 2010 was at or under 3%. For the general population of teens, prevention should focus on larger issues about substance use and specifics about gateway drugs, taking care to avoid implying that even gateway use is a typical or appropriate part of teen years.

For youth who are already regularly using a substance, approaches that focus on social influence or on general dangers of substance use are not likely to succeed. Although some proportion of these youth may eventually learn on their own through life experience to stop use, many others will not be able to reverse a spiral toward heavier use and worse consequences without some form of individual intervention by family, friends, and/or substance abuse treatment professionals. Youth initiation of regular use of a gateway substance is therefore a very significant step, implying higher risk of later problems, higher risk of trying other substances, much lower chance of success of general preventive messages, and increasing need for intervention of some kind. The observation that some people are able to continue to use without spiraling into greater self-destruction is far from being an adequate response to concern about the toll of substance use on individual youth, their families, and their communities. There are many good reasons to try to stop youth before the gateway, at the gateway, or as soon after regular use starts as can be done.

A Note about Variation in Gateway Substances

Alcohol has been an especially common gateway substance, so has been featured in the above discussion. However, the list of what substances serve as gateway drugs does vary over periods of time and across regions. Currently most American youth start with alcohol use, though some may first use tobacco, inhalants, marijuana, or some other substance. The term “use” in this case refers to ongoing use of a substance: more than just one or two times. Youth who use a gateway substance (especially alcohol) only once or twice are essentially non-users, or more like non-users than regular users.

From the current perspective, a decade into the 21st century, there is legitimate speculation that prescription drugs may be becoming a gateway drug. Prescription drug abuse has increased tremendously during the past ten years as prescription drugs have become more easily available and widely distributed. Prescription drugs seem to serve in some cases as intermediate gateway drugs: not the first used, but part of a quick progression from just alcohol or marijuana to post-gateway drugs like methamphetamine or heroin. While some youth may begin regular “non-medical” use of prescription drugs without having used any illicit drugs, it is still currently rare to find a young person who began non-medical use of a prescription drug before they began to drink regularly. Unfortunately, the combination of alcohol and prescription drug use can greatly increase the danger to young people who use both simultaneously.

Substance Abuse Prevention and Youth
Applying and Extending the Comprehensive Theory of Substance Abuse Prevention

Alan Markwood

May, 2011

Based on the Comprehensive Theory of Substance Abuse Prevention (1/27/2011), a case can be made for devoting a majority of substance abuse prevention efforts toward parents and other adults in regard to youth substance use, rather than directly toward youth. The purpose of the current discussion is to better define the limits of that balance, and how to best serve youth in programs that aim to serve youth.

One important point is to understand the intended meaning of “substance abuse prevention efforts”. Based on the “prime dichotomy” described in the Comprehensive Theory, one set of efforts would be aimed at young parents and young adults who are likely to soon be parents, and would focus less on the issue of substance abuse than on the larger issue of parenting that avoids introducing major traumas (or major neglect) into the lives of very young children (under age 3), and to some extent also 3-10 year-olds. The main way that issues of substance use and abuse would be included would be in terms of avoiding substance use when pregnant (or likely to become pregnant), and avoiding substance abuse by parents at any time. For the most part, the mission and resources for these kinds of efforts would be in various elements of public health and child protection fields, since both the range of potential family problems and the impact of effective interventions would be much broader than just substance abuse issues. This is where the idea of the commonality of various youth problems and need for combined, multifaceted preventive efforts is most accurate.

The second set of efforts, on the other hand, would need to be very focused on issues of alcohol and other drug use by youth. The prime goal of this set of efforts is to protect youth (especially pre-teens and teens) from social influences that promote substance use, and prevent youth access to alcohol or other drugs. The rest of the discussion pertains to this set of efforts, concerned with preventing substance use by current teens and pre-teens.

Another important distinction is between “primary prevention” efforts that help keep youth from ever starting regular use of any substance, as distinct from “secondary prevention” programs that intervene with youth who have already used a substance, if not regularly, at least two or more times. Although some primary prevention efforts, such as making alcohol less accessible to underage youth, may also have some effect on youth who have started to use a substance, the magnitude of intervention needed to respond appropriately to these youth goes beyond “universal prevention” initiatives, and into the realm of “indicated” services for each youth individually identified as needing secondary intervention. Both types of services are needed, but should rarely, if ever, be combined. When funds or positions to address community-wide primary prevention are combined with “secondary prevention” (interventive, such as counseling services), the greater urgency of intervention needs will tend to divert more and more resources from primary prevention. For example, if one person is hired to engage in primary prevention of drugs half the time and individual interventions half the time, the community prevention work will tend to be displaced whenever there are more than average interventive needs, but rarely will interventive services be in a position to yield time to community prevention efforts. Both kinds of service are needed, but they are different and should be separately planned and funded.

Given the kinds of limitations discussed so far, the rest of this discussion can be described as pertaining to the primary prevention of substance use by pre-teens and teens. It is within that goal area that the Comprehensive Theory suggests that adult-targeted programs to prevent and limit youth substance use may be underutilized in proportion to their relative power to lower the incidence and prevalence of youth substance use. This is a difficult concept for many adults concerned about youth, because direct appeals to youth seem more logical than time spent communicating with adults about youth substance use. The problem is that drug prevention programs for youth have limited capacity for success if adult norms about youth use are not strongly against use. Also, strategies that focus only on basic drug education for youth have very little chance of ever lowering youth substance use, for reasons discussed in the Comprehensive Theory.

The magnitude of negative effect of youth substance use on society is generally underestimated by those not familiar with the studies on that topic. The economic and social costs of youth substance use are sufficient to justify increased private and public support (including in-kind efforts) for all kinds of effective AOD (alcohol and other drug) prevention, but especially for increased work with adults regarding youth use. For those efforts that remain focused on youth more directly, what considerations should guide the nature of these programs and strategies?

The answer likely to be given by a professional substance abuse preventionist or prevention researcher at this time would emphasize “evidence-based” or “research-based” methods. This is because there has traditionally been a lot of effort wasted on approaches that continue to be used even after research shows them to be ineffective. While it is true that ineffective approaches should be replaced with effective approaches, two cautions are in order:

1. There is a tremendous difference between avoiding ineffective programs or strategies and avoiding all but proven programs or strategies. Most of the potential for great improvement in prevention may fall between those two approaches, in the yet-to-be-proven innovations that would be ruled out by the second approach.
2. If the goals of a particular program or strategy are based on more than just decreasing youth substance use among participants, then criteria for effectiveness must address the full set of goals. This consideration is perhaps most relevant to programs that involve cultivating and supporting youth peer leadership of AOD prevention efforts.

Prevention efforts that feature developing youth leaders capable of playing a major role in prevention programs for youth or for adults regarding youth substance are valuable as investments in the future of substance abuse prevention, irrespective of whether or not they add program-specific effectiveness or short-term cost-effectiveness in regard to lowering youth substance use. The delivery of youth prevention programs by trained youth leaders may or may not increase the effectiveness of a program, but its long-term effect on youth leaders is a whole other issue. In many cases there might not be much room for decreasing use rates among youth leaders, to the extent that youth who tend toward avoiding substance use are recruited. However, what is the potential role of the trained youth leader as a future parent, community member, and in many cases future preventionist?

As a future parent, a young person who participates as a leader in drug prevention activities probably will be better prepared to handle youth AOD (alcohol and other drug) issues as a parent. Given the importance to successful drug prevention of parents who are educated about drug prevention issues and committed to action, theoretically the more parents who had prevention leadership experiences as youth, the stronger the protective effect and the lower the youth use rate years after the youth leadership events. The same kind of effect is likely to result from larger segments of the general adult population being active in prevention leadership when they were youth.

The greatest impact would probably take place when individuals who start as a youth prevention leader take on drug prevention as an ongoing professional endeavor. Though in many cases the term “prevention professional” refers to a person employed to carry out prevention efforts, there are some highly motivated and talented adult volunteers whose dedication to preventing youth AOD use leads them to be involved in such a skilled and passionate way that they must be considered to be unpaid professionals in the field.

The impact of a lifetime of work on an issue can be so valuable that a prevention program that inspires just one or two youth to be adult prevention leaders may be paying for itself many times over, over the course of decades.

The current balance between AOD prevention efforts with youth efforts with adults in regard to youth seems to be too tilted toward youth programs in many cases. Though some youth AOD primary prevention programs are needed, probably 75-80% of resources for AOD prevention regarding teens and pre-teens should be used for parent and other adult education about preventing youth substance use, for reasons described in the Comprehensive Theory. When prevention programs do aim to reach youth, in most cases the involvement of youth peer leaders would be most desirable, for long-term capacity building for AOD prevention. Drug-free youth leaders can also play a role in programs or strategies to engage adults in youth AOD prevention.