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Introduction

In 1997, the National Institute on Drug Abuse (NIDA) published the first edition of *Preventing Drug Use among Children and Adolescents: A Research-Based Guide* to share the latest NIDA-funded prevention research findings with parents, educators, and community leaders. The guide introduced the concept of "research-based prevention" with questions and answers on risk and protective factors, community planning and implementation, and 14 prevention principles derived from effective drug abuse prevention research. Examples of research-tested prevention programs were also featured. The purpose was to help prevention practitioners use the results of prevention research to address drug abuse among children and adolescents in communities across the country.

Since then, NIDA's prevention research program has more than doubled in size and scope to address all stages of child development, a mix of audiences and settings, and the delivery of effective services at the community level. The Institute now focuses on risks for drug abuse and other problem behaviors that occur throughout a child's development. Prevention interventions designed and tested to address risks can help children at every step along their developmental path. Working more broadly with families, schools, and communities, scientists have found effective ways to help people gain the skills and approaches to stop problem behaviors before they occur. Research funded by NIDA and other Federal research organizations—such as the National Institute of Mental Health and the Centers for Disease Control and Prevention—shows that early intervention can prevent many adolescent risk behaviors.

This second edition, reflecting NIDA's expanded research program and knowledge base, is more than double the size of the first edition. The prevention principles have been expanded to provide more understanding about the latest research, and principles relevant to each chapter accompany the discussion. Additional questions and answers, a new chapter on community planning, and more information on the core elements in research-based prevention programs have been added. Each chapter ends with a "Community Action Box" for primary readers—parents, educators, and community leaders. As in the first edition, the descriptions of prevention programs are presented as examples of research-based programs currently available.

The expanded *Selected Resources* section offers Web sites, sponsored by Federal and private-sector agencies. Some feature registries of effective prevention programs with agency-specific selection criteria and other resources for community planning. The *Selected References* section includes up-to-date books and journal articles that provide more information on prevention research. NIDA hopes that this revised guide is helpful to drug abuse prevention efforts among children and adolescents in homes, schools, and communities nationwide.

Prevention Principles

These revised prevention principles have emerged from research studies funded by NIDA on the origins of drug abuse behaviors and the common elements found in research on effective prevention programs. Parents, educators, and community leaders can use these principles to help guide their thinking, planning, selection, and delivery of drug abuse prevention programs at the community level. The references following each principle are representative of current research.

Risk Factors and Protective Factors

PRINCIPLE 1 Prevention programs should enhance protective factors and reverse or reduce risk factors (Hawkins et al. 2002).

- The risk of becoming a drug abuser involves the relationship among the number and type of risk factors (e.g., deviant attitudes and behaviors) and protective factors (e.g., parental support) (Wills and McNamara et al. 1996).
- The potential impact of specific risk and protective factors changes with age. For example, risk factors within the family have greater impact on a younger child, while association with drug-abusing peers may be a more significant risk factor for an adolescent (Gerstein and Green 1993; Kumpfer et al. 1998).
- Early intervention with risk factors (e.g., aggressive behavior and poor self-control) often has a greater impact than later intervention by changing a child's life path (trajectory) away from problems and toward positive behaviors (Ialongo et al. 2001).
- While risk and protective factors can affect people of all groups, these factors can have a different effect depending on a person's age, gender, ethnicity, culture, and environment (Beauvais et al. 1996; Moon et al. 1999).

PRINCIPLE 2 Prevention programs should address all forms of drug abuse, alone or in combination, including the underage use of legal drugs (e.g., tobacco or alcohol); the use of illegal drugs (e.g., marijuana or heroin); and the inappropriate use of legally obtained substances (e.g., inhalants), prescription medications, or over-the-counter drugs (Johnston et al. 2002).

PRINCIPLE 3 Prevention programs should address the type of drug abuse problem in the local community, target modifiable risk factors, and strengthen identified protective factors (Hawkins et al. 2002).

PRINCIPLE 4 Prevention programs should be tailored to address risks specific to population or audience characteristics, such as age, gender, and ethnicity, to improve program effectiveness (Oetting et al. 1997).

Prevention Planning

Family Programs

PRINCIPLE 5 Family-based prevention programs should enhance family bonding and relationships and include parenting skills; practice in developing, discussing, and enforcing family policies on substance abuse; and training in drug education and information (Ashery et al. 1998).

Family bonding is the bedrock of the relationship between parents and children. Bonding can be strengthened through skills training on parent supportiveness of children, parent-child communication, and parental involvement (Kosterman et al. 1997).

- Parental monitoring and supervision are critical for drug abuse prevention. These skills can be enhanced with training on rule-setting; techniques for monitoring activities; praise for appropriate behavior; and moderate, consistent discipline that enforces defined family rules (Kosterman et al. 2001).
- Drug education and information for parents or caregivers reinforces what children are learning about the harmful effects of drugs and opens opportunities for family discussions about the abuse of legal and illegal substances (Bauman et al. 2001).
- Brief, family-focused interventions for the general population can positively change specific parenting behavior that can reduce later risks of drug abuse (Spoth et al. 2002b).

School Programs

PRINCIPLE 6 Prevention programs can be designed to intervene as early as *preschool* to address risk factors for drug abuse, such as aggressive behavior, poor social skills, and academic difficulties (Webster-Stratton 1998; Webster-Stratton et al. 2001).

PRINCIPLE 7 Prevention programs for *elementary school children* should target improving academic and social-emotional learning to address risk factors for drug abuse, such as early aggression, academic failure, and school dropout. Education should focus on the following skills (Ialongo et al. 2001; Conduct Problems Prevention Work Group 2002b):

- self-control;
- emotional awareness;
- communication;
- social problem-solving; and
- academic support, especially in reading.

PRINCIPLE 8 Prevention programs for *middle* or *junior high* and *high school students* should increase academic and social competence with the following skills (Botvin et al.1995; Scheier et al. 1999):

- study habits and academic support;
- communication;
- peer relationships;
- self-efficacy and assertiveness;
- drug resistance skills;
- reinforcement of antidrug attitudes; and
- strengthening of personal commitments against drug abuse.

Community Programs

PRINCIPLE 9 Prevention programs aimed at general populations at key transition points, such as the transition to middle school, can produce beneficial effects even among high-risk families and children. Such interventions do not single out risk populations and, therefore, reduce labeling and promote bonding to school and community (Botvin et al. 1995; Dishion et al. 2002).

PRINCIPLE 10 Community prevention programs that combine two or more effective programs, such as family-based and school-based programs, can be more effective than a single program alone (Battistich et al. 1997).

PRINCIPLE 11 Community prevention programs reaching populations in multiple settings—for example, schools, clubs, faith-based organizations, and the media—are most effective when they present consistent, community-wide messages in each setting (Chou et al. 1998).

Prevention Program Delivery

PRINCIPLE 12 When communities adapt programs to match their needs, community norms, or differing cultural requirements, they should retain core elements of the original research-based intervention (Spoth et al. 2002b), which include:

- **Structure** (how the program is organized and constructed);
- **Content** (the information, skills, and strategies of the program); and
- **Delivery** (how the program is adapted, implemented, and evaluated).

PRINCIPLE 13 Prevention programs should be long-term with repeated interventions (i.e., booster programs) to reinforce the original prevention goals. Research shows that the benefits from middle school prevention programs diminish without followup programs in high school (Scheier et al. 1999).

PRINCIPLE 14 Prevention programs should include teacher training on good classroom management practices, such as rewarding appropriate student behavior. Such techniques help to foster students' positive behavior, achievement, academic motivation, and school bonding (Ialongo et al. 2001).

PRINCIPLE 15 Prevention programs are most effective when they employ interactive techniques, such as peer discussion groups and parent role-playing, that allow for active involvement in learning about drug abuse and reinforcing skills (Botvin et al. 1995).

PRINCIPLE 16 Research-based prevention programs can be cost-effective. Similar to earlier research, recent research shows that for each dollar invested in prevention, a savings of up to $10 in treatment for alcohol or other substance abuse can be seen (Pentz 1998; Hawkins 1999; Aos et al. 2001; Spoth et al. 2002a).

Chapter 1: Risk Factors and Protective Factors

This chapter describes how risk and protective factors influence drug abuse behaviors, the early signs of risk, transitions as high-risk periods, and general patterns of drug abuse among children and adolescents. A major focus is how prevention programs can strengthen protection or intervene to reduce risks.

What are risk factors and protective factors?

Studies over the past two decades have tried to determine the origins and pathways of drug abuse and addiction—how the problem starts and how it progresses. Many factors have been identified that help differentiate those more likely to abuse drugs from those less vulnerable to drug abuse. Factors associated with greater potential for drug abuse are called "risk" factors, while those associated with reduced potential for abuse are called "protective" factors. Please note, however, that most individuals at risk for drug abuse do not start using drugs or become addicted. Also, a risk factor for one person may not be for another.

As discussed in the Introduction, risk and protective factors can affect children in a developmental *risk trajectory,* or path. This path captures how risks become evident at different stages of a child's life. For example, early risks, such as out-of-control aggressive behavior, may be seen in a very young child. If not addressed through positive parental actions, this behavior can lead to additional risks when the child enters school. Aggressive behavior in school can lead to rejection by peers, punishment by teachers, and academic failure. Again, if not addressed through preventive interventions, these risks can lead to the most immediate behaviors that put a child at risk for drug abuse, such as skipping school and associating with peers who abuse drugs. In focusing on the risk path, research-based prevention programs can intervene early in a child's development to strengthen protective factors and reduce risks long before problem behaviors develop.

The table below provides a framework for characterizing risk and protective factors in five *domains,* or settings. These domains can then serve as a focus for prevention. As the first two examples suggest, some risk and protective factors are mutually exclusive—the presence of one means the absence of the other. For example, in the Individual domain, early aggressive behavior, a risk factor, indicates the absence of impulse control, a key protective factor. Helping a young child learn to control impulsive behavior is a focus of some prevention programs.

Risk Factors	Domain	Protective Factors
Early Aggressive Behavior	Individual	Impulse Control
Lack of Parental Supervision	Family	Parental Monitoring
Substance Abuse	Peer	Academic Competence
Drug Availability	School	Antidrug Use Policies
Poverty	Community	Strong Neighborhood Attachment

Other risk and protective factors are independent of each other, as demonstrated in the table as examples in the peer, school, and community domains. For example, in the school domain, drugs may be available, even though the school has "antidrug policies." An intervention may be to strengthen enforcement so that school policies create the intended school environment.

Risk factors for drug abuse represent challenges to an individual's emotional, social, and academic development. These risk factors can produce different effects, depending on the individual's personality traits, phase of development, and environment. For instance, many serious risks, such as early aggressive behavior and poor academic achievement, may indicate that a young child is on a negative developmental path headed toward problem behavior. Early intervention, however, can help reduce or reverse these risks and change that child's developmental path.

For young children already exhibiting serious risk factors, delaying intervention until adolescence will likely make it more difficult to overcome risks. By adolescence, children's attitudes and behaviors are well established and not easily changed.

Risk factors can influence drug abuse in several ways. They may be additive: The more risks a child is exposed to, the more likely the child will abuse drugs. Some risk factors are particularly potent, yet may not influence drug abuse unless certain conditions prevail. Having a family history of substance abuse, for example, puts a child at risk for drug abuse. However, in an environment with no drug-abusing peers and strong antidrug norms, that child is less likely to become a drug abuser. And the presence of many protective factors can lessen the impact of a few risk factors. For example, strong protection—such as parental support and involvement—can reduce the influence of strong risks, such as having substance-abusing peers. ***An important goal of prevention, then, is to change the balance between risk and protective factors so that protective factors outweigh risk factors.***

Chapter 1 **Principles**

Risk Factors and Protective Factors

PRINCIPLE 1 Prevention programs should enhance protective factors and reverse or reduce risk factors.

- The risk of becoming a drug abuser involves the relationship among the number and type of risk factors (e.g., deviant attitudes and behaviors) and protective factors (e.g., parental support).
- The potential impact of specific risk and protective factors changes with age. For example, risk factors within the family have greater impact on a younger child, while association with drug-abusing peers may be a more significant risk factor for an adolescent.
- Early intervention with risk factors (e.g., aggressive behavior and poor self-control) often has a greater impact than later intervention by changing a child's life path (trajectory) away from problems and toward positive behaviors.
- While risk and protective factors can affect people of all groups, these factors can have a different effect depending on a person's age, gender, ethnicity, culture, and environment.

PRINCIPLE 2 Prevention programs should address all forms of drug abuse, alone or in combination, including the underage use of legal drugs (e.g., tobacco or alcohol); the use of illegal drugs (e.g., marijuana or heroin); and the inappropriate use of legally obtained substances (e.g., inhalants), prescription medications, or over-the-counter drugs.

PRINCIPLE 3 Prevention programs should address the type of drug abuse problem in the local community, target modifiable risk factors, and strengthen identified protective factors.

PRINCIPLE 4 Prevention programs should be tailored to address risks specific to population or audience characteristics, such as age, gender, and ethnicity, to improve program effectiveness.

Gender may also determine how an individual responds to risk factors. Research on relationships within the family shows that adolescent girls respond positively to parental support and discipline, while adolescent boys sometimes respond negatively. Research on early risk behaviors in the school setting shows that aggressive behavior in boys and learning difficulties in girls are the primary causes of poor peer relationships. These poor relationships, in turn, can lead to social rejection, a negative school experience, and problem behaviors including drug abuse.

What are the early signs of risk that may predict later drug abuse?

Some signs of risk can be seen as early as infancy. Children's personality traits or temperament can place them at increased risk for later drug abuse. Withdrawn and aggressive boys, for example, often exhibit problem behaviors in interactions with their families, peers, and others they encounter in social settings. If these behaviors continue, they will likely lead to other risks. These risks can include academic failure, early peer rejection, and later affiliation with deviant peers, often the most immediate risk for drug abuse in adolescence. Studies have shown that children with poor academic performance and inappropriate social behavior at ages 7 to 9 are more likely to be involved with substance abuse by age 14 or 15.

In the Family

Children's earliest interactions occur within the family and can be positive or negative. For this reason, factors that affect early development in the family are probably the most crucial. Children are more likely to experience risk when there is:

- lack of mutual attachment and nurturing by parents or caregivers;
- ineffective parenting;
- a chaotic home environment;
- lack of a significant relationship with a caring adult; and
- a caregiver who abuses substances, suffers from mental illness, or engages in criminal behavior.

These experiences, especially the abuse of drugs and other substances by parents and other caregivers, can impede bonding to the family and threaten feelings of security that children need for healthy development. On the other hand, families can serve a protective function when there is:

- a strong bond between children and their families;
- parental involvement in a child's life;
- supportive parenting that meets financial, emotional, cognitive, and social needs; and
- clear limits and consistent enforcement of discipline.

Finally, critical or sensitive periods in development may heighten the importance of risk or protective factors. For example, mutual attachment and bonding between parents and children usually occurs in infancy and early childhood. If it fails to occur during those developmental stages, it is unlikely that a strong positive attachment will develop later in the child's life.

Outside the Family

Other risk factors relate to the quality of children's relationships in settings outside the family, such as in their schools, with their peers, teachers, and in the community. Difficulties in these settings can be crucial to a child's emotional, cognitive, and social development. Some of these risk factors are:

- inappropriate classroom behavior, such as aggression and impulsivity;
- academic failure;
- poor social coping skills;
- association with peers with problem behaviors, including drug abuse; and
- misperceptions of the extent and acceptability of drug-abusing behaviors in school, peer, and community environments.

Association with drug-abusing peers is often the most immediate risk for exposing adolescents to drug abuse and delinquent behavior. Research has shown, however, that addressing such behavior in interventions can be challenging. For example, a recent study (Dishion et al. 2002) found that placing high-risk youth in a peer group intervention resulted in negative outcomes. Current research is exploring the role that adults and positive peers can play in helping to avoid such outcomes in future interventions.

Other factors—such as drug availability, drug trafficking patterns, and beliefs that drug abuse is generally tolerated—are also risks that can influence young people to start to abuse drugs.

Family has an important role in providing protection for children when they are involved in activities outside the family. When children are outside the family setting, the most salient protective factors are:

- age-appropriate parental monitoring of social behavior, including establishing curfews, ensuring adult supervision of activities outside the home, knowing the child's friends, and enforcing household rules;
- success in academics and involvement in extracurricular activities;
- strong bonds with prosocial institutions, such as school and religious institutions; and
- acceptance of conventional norms against drug abuse.

What are the highest risk periods for drug abuse among youth?

Research has shown that the key risk periods for drug abuse occur during major transitions in children's lives. These transitions include significant changes in physical development (for example, puberty) or social situations (such as moving or parents divorcing) when children experience heightened vulnerability for problem behaviors.

The first big transition for children is when they leave the security of the family and enter school. Later, when they advance from elementary school to middle or junior high school, they often experience new academic and social situations, such as learning to get along with a wider group of peers and having greater expectations for academic performance. It is at this stage—early adolescence—that children are likely to encounter drug abuse for the first time.

Then, when they enter high school, young people face additional social, psychological, and educational challenges. At the same time, they may be exposed to greater availability of drugs, drug abusers, and social engagements involving drugs. These challenges can increase the risk that they will abuse alcohol, tobacco, and other drugs.

A particularly challenging situation in late adolescence is moving away from home for the first time without parental supervision, perhaps to attend college or other schooling. Substance abuse, particularly of alcohol, remains a major public health problem for college populations.

When young adults enter the workforce or marry, they again confront new challenges and stressors that may place them at risk for alcohol and other drug abuse in their adult environments. But these challenges can also be protective when they present opportunities for young people to grow and pursue future goals and interests. Research has shown that these new lifestyles can serve as protective factors as the new roles become more important than being involved with drugs.

Risks appear at every transition from early childhood through young adulthood; therefore, prevention planners need to consider their target audiences and implement programs that provide support appropriate for each developmental stage. They also need to consider how the protective factors involved in these transitions can be strengthened.

When and how does drug abuse start and progress?

Studies such as the National Survey on Drug Use and Health, formerly called the National Household Survey on Drug Abuse, reported by the Substance Abuse and Mental Health Services Administration, indicate that some children are already abusing drugs by age 12 or 13, which likely means that some may begin even earlier. Early abuse includes such drugs as tobacco, alcohol, inhalants, marijuana, and psychotherapeutic drugs. If drug abuse persists into later adolescence, abusers typically become more involved with marijuana and then advance to other illegal drugs, while continuing their abuse of tobacco and alcohol. Studies have also shown that early initiation of drug abuse is associated with greater drug involvement, whether with the same or different drugs. Note, however, that both one-time and long-term surveys indicate that most youth do not progress to abusing other drugs. But among those who do progress, their drug abuse history can vary by neighborhood drug availability, demographic groups, and other characteristics of the abuser population. In general, the pattern of abuse is associated with levels of social disapproval, perceived risk, and the availability of drugs in the community.

Scientists have proposed several hypotheses as to why individuals first become involved with drugs and then escalate to abuse. One explanation is a biological cause, such as having a family history of drug or alcohol abuse, which may genetically predispose a person to drug abuse. Another explanation is that starting to abuse a drug may lead to affiliation with more drug-abusing peers which, in turn, exposes the individual to other drugs. Indeed, many factors may be involved.

Different patterns of drug initiation have been identified based on gender, race or ethnicity, and geographic location. For example, research has found that the circumstances in which young people are offered drugs can depend on gender. Boys generally receive more drug offers and at younger ages. Initial drug abuse can also be influenced by where drugs are offered, such as parks, streets, schools, homes, or parties. Additionally, drugs may be offered by different people including, for example, siblings, friends, or even parents.

While most youth do not progress beyond initial use, a small percentage rapidly escalate their substance abuse. Researchers have found that these youth are the most likely to have experienced a combination of high levels of risk factors with low levels of protective factors. These adolescents were characterized by high stress, low parental support, and low academic competence.

However, there are protective factors that can suppress the escalation to substance abuse. These factors include self-control, which tends to inhibit problem behavior and often increases naturally as children mature during adolescence. In addition, protective family structure, individual personality, and environmental variables can reduce the impact of serious risks of drug abuse. Preventive interventions can provide skills and support to high-risk youth to enhance levels of protective factors and prevent escalation to drug abuse.

COMMUNITY ACTION BOX

- **Parents** can use information on risk and protection to help them develop positive preventive actions (e.g. talking about family rules) before problems occur.
- **Educators** can strengthen learning and bonding to school by addressing aggressive behaviors and poor concentration—risks associated with later onset of drug abuse and related problems.
- **Community Leaders** can assess community risk and protective factors associated with drug problems to best target prevention services.

Chapter 2: Planning for Drug Abuse Prevention in the Community

This chapter presents a process to help communities as they plan to implement research-based prevention programs. It provides guidance on applying the prevention principles, assessing needs and community readiness, motivating the community to take action, and evaluating the impact of the programs implemented. Additional planning resources are highlighted in *Selected Resources and References.*

How can the community develop a plan for research-based prevention?

Prevention research suggests that a well-constructed community plan incorporates the characteristics outlined in the following box.

THE COMMUNITY PLAN

- **Identifies** the specific drugs and other child and adolescent problems in a community;
- **Builds** on existing resources (e.g., current drug abuse prevention programs);
- **Develops** short-term goals relevant to implementation of research-based prevention programs;
- **Projects** long-term objectives so that plans and resources are available for the future; and
- **Incorporates** ongoing assessments to evaluate the effectiveness of prevention strategies.

Planning Process

Planning usually starts with an assessment of drug abuse and other child and adolescent problems, which includes measuring the level of substance abuse in the community as well as examining the level of other community risk factors (e.g., poverty) [see section on "How can the community assess the level of risk for drug abuse?" for more details]. The results of the assessment can be used to raise community awareness of the nature and seriousness of the problem and guide the selection of programs most relevant to the community's needs. This is an important process, whether a community is selecting a school-based prevention curriculum or planning multiple interventions that cut across the entire community.

Next, an assessment of the community's readiness for prevention can help determine additional steps that are needed to educate the community before beginning the prevention effort. Then, a review of existing programs is needed to determine gaps in addressing community needs and identifying additional resources.

Finally, community planning can benefit from contributions of community organizations that provide services to youth. Convening a meeting of leaders of youth-serving organizations can aid in coordinating ideas, resources, and expertise to help implement and sustain research-based programs. Planning for implementation and sustainability requires resource development for staffing and management, long-term funding commitments, and linkages with existing delivery systems.

How can the community use the prevention principles in prevention planning?

Several prevention principles provide a framework for effective prevention planning and programming by presenting key concepts in implementing research-

based prevention. Consider, for example, **Principle 3: "Prevention programs should address the type of drug abuse problem in the local community, target modifiable risk factors, and strengthen identified protective factors."** This principle describes how the plan should reflect the reality of the drug problem in that community and, importantly, what needs to be done to address it.

Community-wide efforts also can be guided by **Principle 9: "Prevention programs aimed at general populations at key transition points . . . can produce beneficial effects, even among high-risk families and children."** With carefully structured programs, the community can provide services to all populations, including those at high risk, without labeling or stigmatizing them.

In implementing a more specific program, such as a family program within the educational system, the principles address some of the required content areas. For instance, **Principle 5 states, "Family-based prevention programs should enhance family bonding and relationships and include parenting skills; practice in developing, discussing, and enforcing family policies on substance abuse; and training in drug education and information."**

The principles offer guidance for selecting or adapting effective programs that meet specific community needs. ***It is important to recognize, however, that not every program that seems consistent with these research-based prevention principles is necessarily effective.*** To be effective, programs need to incorporate the core elements identified in research (see Chapter 3). These include appropriate structure and content, adequate resources for training and materials, and other implementation requirements.

For more information on resources to help communities in prevention planning and the research underlying the prevention principles, see *Selected Resources and References*.

Chapter 2 **Principles**

Principles for Prevention Planning

PRINCIPLE 2 Prevention programs should address all forms of drug abuse, alone or in combination, including the underage use of legal drugs (e.g., tobacco or alcohol); the use of illegal drugs (e.g., marijuana or heroin); and the inappropriate use of legally obtained substances (e.g., inhalants), prescription medications, or over-the-counter drugs.

PRINCIPLE 3 Prevention programs should address the type of drug abuse problem in the local community, target modifiable risk factors, and strengthen identified protective factors.

PRINCIPLE 4 Prevention programs should be tailored to address risks specific to population or audience characteristics, such as age, gender, and ethnicity, to improve program effectiveness.

PRINCIPLE 9 Prevention programs aimed at general populations at key transition points, such as the transition to middle school, can produce beneficial effects even among high-risk families and children. Such interventions do not single out risk populations and, therefore, reduce labeling and promote bonding to school and community.

PRINCIPLE 10 Community prevention programs that combine two or more effective programs, such as family-based and school-based programs, can be more effective than a single program alone.

PRINCIPLE 11 Community prevention programs reaching populations in multiple settings—for example, schools, clubs, faith-based organizations, and the media—are most effective when they present consistent, community-wide messages in each setting.

How can the community assess the level of risk for drug abuse?

To assess the level of risk of youth engaging in drug abuse, it is important to:

- measure the nature and extent of drug abuse patterns and trends;
- collect data on the risk and protective factors throughout the community;
- understand the community's culture and how that culture affects and is affected by drug abuse;
- consult with community leaders working in drug abuse prevention, treatment, law enforcement, mental health, and related areas;
- assess community awareness of the problem; and
- identify existing prevention efforts already under way to address the problem.

Researchers have developed many tools to assess the extent of a community's drug problem. Most of these tools assess the nature of the problem—what drugs are available and who is abusing them. Some of them assess the extent of abuse by estimating how many people are abusing drugs. Others assess factors associated with abuse, such as juvenile delinquency, school absenteeism, and school dropout rates. Researchers have also developed instruments that assess individual risk status. It is important when beginning the assessment process to collect sufficient information to help local planners target the intervention by population and geographic area.

As an example, the **Communities That Care** prevention operating system, developed by Hawkins and colleagues at the University of Washington (Hawkins et al. 2002), is based on epidemiological methods. An assessment is conducted to collect data on the distribution of risk and protective factors at the community level. This approach helps local planners identify geographic areas with the highest levels of risk and the lowest levels of protective resources. This analysis tool assists planners in selecting the most effective prevention interventions to address the specific risks of neighborhoods.

Other data sources and measurement instruments (such as questionnaires) that can help in community planning include the following resources.

- **Public access data.** Several large national surveys provide data to help local communities understand how their drug problems relate to the national picture. These include the National Survey on Drug Use and Health, Monitoring the Future Study, and Youth Behavior Risk Study. Information on accessing these data is provided in *Selected Resources and References*.
- **Public access questionnaires.** The studies listed above and many other federally sponsored data sets make the data collection instruments available for adaptation and use by the public. Communities can conduct local studies using these instruments to collect uniform data that can often be compared with national findings.
- **Archival data.** Data from public access files from school systems, health departments, hospital emergency rooms, law enforcement agencies, and drug abuse treatment facilities can be analyzed to identify the nature of the local drug problem and other youth problems.

- **Ethnographic studies.** Ethnographic approaches use systematic, observational processes to describe behaviors in natural settings, such as studying the abuse of drugs by youth gangs, and documenting the individual perspectives of those under observation.
- **Other qualitative methods.** Other qualitative methods, such as convening focus groups of representatives of drug-abusing subpopulations or key interviews with community officials, can be used to gain a greater understanding of the local drug abuse problem.

As each of these methods has advantages and disadvantages, it is advisable, permitting resources, to use multiple strategies to assess community risk to provide the best information possible.

The Community Epidemiology Work Group (CEWG), another data source pioneered in the early 1970s by NIDA and communities nationwide, is composed of researchers from 21 U.S. cities who collect or use archival data to characterize the nature of the drug problem in their locations. CEWG representatives meet with NIDA biannually to inform the Institute and fellow CEWG members of changing drug trends in their cities. The work group has developed a *Guide for Community Epidemiology Surveillance Networks on Drug Abuse* to help other communities use this approach to provide up-to-date information on local drug abuse problems.

Using information obtained through these many sources can help community leaders make sound decisions about programs and policies. Analyzing these data before implementing new programs can also help establish a baseline for evaluating results. To be most informative, periodic assessments need to be made routinely.

For more information on how communities can assess the level or risk of drug abuse in their community, see *Selected Resources and References*.

Is the community ready for prevention?

Identifying a serious level of risk in a community does not always translate into community readiness to take action. Based on studies of many small communities, researchers have identified nine stages of readiness that can guide prevention planning (Plested et al. 1999). Applying measures to assess readiness, prevention planners can then identify the critical steps needed to implement programs (see table on page 20). Although much of the research on the stages of community readiness has examined small communities, large communities find that these stages provide a structure to describe levels of awareness of drug issues in their community and readiness to embrace a prevention program. Awareness is assessed at two levels: that of the public (by examining the nature and level of drug coverage in the news) and that of officials (by determining if they have taken a position on drug abuse in the community).

Community leaders can begin assessing their community's readiness by interviewing key informants in their community. Additional planning and program sources can be found in *Selected Resources and References*. Web sites, contact information, and publications offer further information to guide community efforts.

ASSESSING READINESS*		COMMUNITY ACTION
Readiness Stage	Community Response	Ideas
1. No awareness	Relative tolerance of drug abuse	Create motivation. Meet with community leaders involved with drug abuse prevention; use the media to identify and talk about the problem; encourage the community to see how it relates to community issues; begin preplanning.
2. Denial	Not happening here, can't do anything about it	
3. Vague awareness	Awareness, but no motivation	
4. Preplanning	Leaders aware, some motivation	
5. Preparation	Active energetic leadership and decisionmaking	Work together. Develop plans for prevention programming through coalitions and other community groups.
6. Initiation	Data used to support prevention actions	Identify and implement research-based programs.
7. Stabilization	Community generally supports existing program	Evaluate and improve ongoing programs.
8. Confirmation/ Expansion	Decisionmakers support improving or expanding programs	Institutionalize and expand programs to reach more populations.
9. Professionalization	Knowledgeable of community drug problem; expect effective solutions	Put multicomponent programs in place for all audiences.

* Plested et al. 1999.

How can the community be motivated to implement research-based prevention programs?

The methods needed to motivate a community to act depend on the particular community's stage of readiness. At lower stages of readiness, individual and small group meetings may be needed to attract support from those with great influence in the community. At higher levels of readiness, it may be possible to establish a community board or coalition of key leaders from public- and private-sector organizations. This can provide the impetus for action.

Community coalitions can and do hold community-wide meetings, develop public education campaigns, present data that support the need for research-based prevention programming, and attract sponsors for comprehensive drug abuse prevention strategies.

But care is needed in organizing a community-level coalition to ensure that its programming incorporates research-tested strategies and programs—at the individual, school, and community levels. Having a supportive infrastructure that includes representatives across the community can reinforce prevention messages, provide resources, and sustain prevention programming. Introducing a school-based curriculum, however, requires less community involvement, but is still a focused preventive effort.

Research has shown that prevention programs can use the media to raise public awareness of the seriousness of a community's drug problem and prevent drug abuse among specific populations. Using local data and speakers from the community demonstrates that the drug problem is real and that action is needed. Providing some of the examples of research-based programs described in Chapter 4 can help mobilize the community for change.

How can the community assess the effectiveness of current prevention efforts?

Assessing prevention efforts can be challenging for a community, given limited resources and limited access to expertise in program evaluation. Many communities begin the process with a structured review of current prevention programs to determine:

- *What programs are currently in place in the community?*
- *Were strict scientific standards used to test the programs during their development?*
- *Do the programs match community needs?*
- *Are the programs being carried out as designed?*
- *What percentage of at-risk youth is being reached by the program?*

Another evaluation approach is to track existing data over time on drug abuse among students in school, rates of truancy, school suspensions, drug-abuse arrests, and drug-related emergency room admissions. The use of the information obtained in the initial community drug abuse assessment can serve as a baseline for measuring change in long-term trends. Because the nature and extent of drug abuse problems can change with time, it is wise to periodically assess community risk and protective factors to help ensure that the programs in place appropriately address current community needs.

Communities may wish to consult with State and county prevention authorities for assistance in planning and implementation efforts. Also, federally supported publications and other resources are available, as noted in *Selected Resources and References*.

In assessing the impact of individual programs, it is important for communities to document how well the program is delivered and the level of intervention participants receive. For example, in assessing a school-based prevention program, key questions to be asked include:

- *Have the teachers mastered the content and interactive teaching strategies needed for the selected curriculum?*
- *How much exposure have the students had to each content area?*
- *Is there an assessment component?*

The community plan should guide actions for prevention over time. Once communities are mobilized, program implementation and sustainability require clear, measurable goals, long-term resources, sustained leadership, and community support to maintain momentum for preventive change. Continuing evaluations keep the community informed and allow for periodic reassessment of needs and goals.

COMMUNITY ACTION BOX

- **Parents** can work with others in their community to increase awareness about the local drug abuse problem and the need for research-based prevention programs.
- **Educators** can work with others in their school and school system to review current programs, and identify research-based prevention interventions appropriate for students.
- **Community Leaders** can organize a community group to develop a community prevention plan, coordinate resources and activities, and support research-based prevention in all sectors of the community.

Chapter 3: Applying Prevention Principles to Drug Abuse Prevention Programs

This chapter describes how the prevention principles have been applied to create effective family, school, and community programs. It offers information on working with risk and protective factors, adapting programs while maintaining fidelity to core elements, implementing and evaluating programs, and understanding the cost-benefits of research-based prevention. The goal is to help communities implement research-based prevention programs.

How are risk and protective factors addressed in prevention programs?

Risk and protective factors are the primary targets of effective prevention programs used in the family, school, and community settings. Prevention programs are usually designed to reach specific populations in their primary settings, such as reaching children at school or through recreational or after-school programs. However, in recent years it has become more common to find programs for any given target group in a variety of settings, such as holding a family-based program in a school or a church. The goal of these programs is to build new and strengthen existing protective factors and reverse or reduce modifiable risk factors in youth.

Prevention programs can be described by the audience or intervention level for which they are designed:

- *Universal* programs are designed for the general population, such as all students in a school.
- *Selective* programs target groups at risk, or subsets of the general population such as children of drug abusers or poor school achievers.
- *Indicated* programs are designed for people who are already experimenting with drugs.

Tiered programs, such as the **Adolescent Transitions Program,** incorporate all three levels of intervention. Others, such as **Early Risers "Skills for Success" Prevention Program,** may have only two levels of intervention.

Details of the programs used as examples in the following sections are provided in Chapter 4.

In the Family

Prevention programs can strengthen protective factors among young children by teaching parents better family communication skills, developmentally appropriate discipline styles, firm and consistent rule enforcement, and other family management skills. Parents also can be taught how to increase their emotional, social, cognitive, and material support, which includes, for example, meeting their children's financial, transportation, health care, and homework needs. Research confirms the benefit of parents taking a more active role in their children's lives, by talking with them about drugs, monitoring their activities, getting to know their friends, understanding their problems and concerns, providing consistent rules and discipline, and being involved in their learning and education. The importance of the parent-child relationship continues through adolescence and beyond.

An example of a *universal* family-based program is the **Strengthening Families Program For Parents and Youth, 10–14,** which provides rural parents guidance on family management skills, communication,

academic support, and parent-child relationships. Recognizing that it can be difficult to attract parents to this program, the researchers encourage participation through flexibility in scheduling and location. Offering conveniences such as babysitting, transportation, and meals make participation more practical for many rural parents, while enhancing the program's success in reaching its goals.

Another type of family program operates within a school setting. **The Adolescent Transitions Program,** for example, is a *tiered* intervention family program. All families can get involved with the *universal* intervention, which makes available a Family Resource Room where information on parenting is provided. The Family Check-Up, the *selective* level of this program, is an assessment process to identify and help families at greater risk by providing them with information and interventions specific to their needs. Families already engaged in problem behaviors and identified as needing an *indicated* intervention are provided more intense assistance and information tailored to their problem. Such assistance might include, for example, individual or family therapy, intensive parent coaching, therapeutic foster care, or other family-specific interventions. The uniqueness of the *tiered* approach is that the whole school participates in the program and all individuals & families receive the appropriate level of help without being labeled in the process.

In School

Prevention programs in schools focus on children's social and academic skills, including enhancing peer relationships, self-control, coping skills, social behaviors, and drug offer refusal skills. School-based prevention programs should be integrated within the school's own goal of enhanced academic performance. Evidence is emerging that a major risk for school failure is a child's inability to read by the third and fourth grades (Barrera et al. 2002), and school failure is strongly associated with drug abuse. Integrated programs strengthen students' bonding to school and reduce their likelihood of dropping out. Most prevention curricula include a normative education component designed to correct the misperception that many students are abusing drugs.

Chapter 3 **Principles**

Principles for Programs

PRINCIPLE 5 Family-based prevention programs should enhance family bonding and relationships and include parenting skills; practice in developing, discussing, and enforcing family policies on substance abuse; and training in drug education and information.

PRINCIPLE 6 Prevention programs can be designed to intervene as early as *preschool* to address risk factors for drug abuse, such as aggressive behavior, poor social skills, and academic difficulties.

PRINCIPLE 7 Prevention programs for *elementary school children* should target improving academic and social-emotional learning to address risk factors for drug abuse, such as early aggression, academic failure, and school dropout.

PRINCIPLE 8 Prevention programs for *middle* or *junior high* and *high school students* should increase academic and social competence.

PRINCIPLE 9 Prevention programs aimed at general populations at key transition points, such as the transition to middle school, can produce beneficial effects even among high-risk families and children. Such interventions do not single out risk populations and, therefore, reduce labeling and promote bonding to school and community.

PRINCIPLE 10 Community prevention programs that combine two or more effective programs, such as family-based and school-based programs, can be more effective than a single program alone.

PRINCIPLE 11 Community prevention programs reaching populations in multiple settings—for example, schools, clubs, faith-based organizations, and the media—are most effective when they present consistent, community-wide messages in each setting.

Chapter 3 **Principles**

Principles for Program Delivery

PRINCIPLE 12 When communities adapt programs to match their needs, community norms, or differing cultural requirements, they should retain core elements of the original research-based intervention.

PRINCIPLE 13 Prevention programs should be long-term with repeated interventions (i.e., booster programs) to reinforce the original prevention goals. Research shows that the benefits from middle school prevention programs diminish without followup programs in high school.

PRINCIPLE 14 Prevention programs should include teacher training in good classroom management practices, such as rewarding appropriate student behavior. Such techniques help to foster student's positive behavior, achievement, academic motivation, and school bonding.

PRINCIPLE 15 Prevention programs are most effective when they employ interactive techniques, such as peer discussion groups and parent role-playing, that allow for active involvement in learning about drug abuse and reinforcing skills.

PRINCIPLE 16 Research-based prevention programs can be cost-effective. Similar to earlier research, recent research shows that for each dollar invested in prevention, a savings of up to $10 in treatment for alcohol or other substance abuse can be seen.

Most research-based prevention interventions in schools include curricula that teach many of the behavioral and social skills described above. The **Life Skills Training Program** exemplifies *universal* classroom programs that are provided to middle-schoolers. The program teaches drug resistance, self-management, and general social skills in a 3-year curriculum, with the third year a booster session offered when students enter high school.

The Caring School Community Program is another type of school-based intervention. This *universal* elementary school program focuses on establishing a "sense of community" among the classroom, school, and family settings. The community support that results helps children succeed in school and cope with stress and other problems when they occur.

An *indicated* intervention that reaches high school students, **Project Towards No Drug Abuse** focuses on students who have failed to succeed in school and are engaged in drug abuse and other problem behaviors. The program seeks to rebuild students' interest in school and their future, correct their misperceptions about drug abuse, and strengthen protective factors, including positive decisionmaking and commitment.

Recent research suggests caution when grouping high-risk teens in peer group interventions for drug abuse prevention. Such groups have been shown to produce negative effects, as participants appear to reinforce substance abuse behaviors over time (Dishion et al. 2002). Research is examining how to prevent such effects, with a particular focus on the role of adults and positive peers.

In the Community

Prevention programs work at the community level with civic, religious, law enforcement, and other government organizations to enhance antidrug norms and prosocial behaviors. Strategies to change key aspects of the environment are often employed at the community level. These can involve instituting new policies, such as the drug-free school concept, or strengthening community practices, such as asking for proof of age to buy cigarettes.

Many programs coordinate prevention efforts across settings to communicate consistent messages through school, work, religious institutions, and the media. Research has shown that programs that reach youth through multiple sources can strongly impact community norms (Chou et al. 1998). Community-based programs also typically include development of policies or enforcement of regulations, mass media efforts, and community-wide awareness programs. Examples include establishing youth curfew, having advertising restrictions, reducing the density of alcohol outlets in the community, raising cigarette prices, and creating drug-free school zones. Some carefully structured and targeted media interventions have proven to be very effective in reducing drug abuse. For example, a mass media campaign targeting sensation-seeking youth reduced marijuana abuse by 27 percent among high sensation-seeking youth (Palmgreen et al. 2001).

Project STAR is an example of a multicomponent drug abuse prevention program for the community. This project tested whether a coordinated effort that encompassed schools, parents, community organizations, health policies, and the media could make a difference in preventing drug abuse among youth. **Project STAR** reached all children and families in the community. The middle school curriculum was the core of the program and was reinforced by homework and other activities of the parent component. Health policies and mass media components were incorporated as well. Long-term followup studies have shown significant impacts in reducing substance abuse, with benefits lasting well into participants' adult years.

What are the core elements of effective research-based prevention programs?

In recent years, many research-based prevention programs have proven effective. These programs were tested with rigorous designs in diverse communities in a wide variety of settings, and with a variety of populations. The most rigorous design tests the program's effects on a group that receives the intervention (i.e., "experimental group") and compares results to a second group that did not receive the intervention (i.e., "control group").

As communities review prevention programs to determine which best fit their needs, the following core elements of effective research-based programs should be considered.

- *Structure*—how each program is organized and constructed;
- *Content*—how the information, skills, and strategies are presented; and
- *Delivery*—how the program is selected or adapted and implemented, as well as how it is evaluated in a specific community.

When adapting programs to match community characteristics, it is important to retain these core elements to ensure that the most effective aspects of the program remain intact. Core elements help build effective research-based prevention programs.

Each core element contains descriptive features, which are presented in the following sections. Tables are included in each section to provide examples of how these features fit together in programs.

Structure

Structure addresses *program type, audience,* and *setting*. Several program types have been shown to be effective in preventing drug abuse. School-based programs, the first to be fully developed and tested, have become the primary approach for reaching all children. Family-based programs have proven effective in reaching both children and their parents in a variety of settings. Media and computer technology programs are beginning to demonstrate effectiveness in reaching people at the community level as well as the individual level. ***Research also shows that combining two or more effective programs, such as family and school programs, can be even more effective than a single program alone. These are called multicomponent programs.***

The following examples illustrate program structure:

Structure of Prevention Programs

Program Type	Audience	Setting
Community (Universal)	All Youth	Billboards
School (Selective)	Middle School Students	After-School
Family (Indicated)	High-Risk Youth and Their Families	Clinic

Within these categories, programs have been designed to specifically target the needs of a particular audience, such as an indicated prevention program for high-risk boys. Examples of other subcategories would include urban or rural populations, racial and ethnic minorities, and different age groups. Researchers are testing how to modify effective programs to best address such audience differences.

The setting describes where the program takes place. Prevention programs are usually designed to reach target populations in their primary setting, such as reaching children at school. It is becoming more common, however, for effective programs to be conducted in settings other than their primary setting—for example, holding a family-based program in a school or a school-based program in a youth organization such as Boys/Girls Clubs. Multicomponent programs reach populations in a variety of settings.

Content

Content is composed of *information, skills development, methods,* and *services*. Information can include facts about drugs and their effects, as well as drug laws and policies. Drug information alone, however, has not been found to be effective in deterring drug abuse. Combining information with skills, methods, and services produces more effective results. Programs include skills development training to build and improve behaviors in important areas, such as communication within the family, social and emotional development, academic and social competence in children, and peer resistance strategies in adolescents.

Methods are oriented toward structural change, such as establishing and enforcing school rules on substance abuse, or enforcing existing laws, such as those on tobacco sales to minors. Services could include school counseling and assistance, peer counseling, family therapy, and health care. These content areas are designed to reduce modifiable risk factors and strengthen protective factors.

The table below describes the type of content included in programs.

Content of Prevention Programs

Program Types	Information	Skills Development	Methods	Services
Community	Drug Trends	Social Skills	Tolerence Policies	Drug-Free Zones
School	Drug Effects	Resistance Skills	Norms Change	School Counseling and Assistance
Family	Drug Abuse Symptoms	Parenting Skills	Home Drug-Testing; Curfew	Family Therapy

Delivery

Delivery includes program *selection* or *adaptation* and *implementation*. The following table describes various delivery approaches.

Delivery of Prevention Programs

Program Type	Program Selection or Adaptation	Implementation Features
Community	Spanish-Speaking Population	Consistent Multimedia Messages
School	Gender	Booster Sessions
Family	Rural	Recruitment/ Retention

During the selection process, communities match effective research-based programs to their community needs. In Chapter 2, it was suggested that communities conduct a structured review of existing programs to determine what gaps remain, given risk and protective factors in the community and the community's drug problems and needs. This information can then be incorporated into the community plan, which guides the selection of new research-based programs. For initial guidance to aid the selection process, communities can refer to the description of programs in several categories found in Chapter 4. Additional planning and program resources can be found in *Selected Resources and References*, which offers Web sites, contact information, and publications to guide community efforts.

Adaptation involves shaping a program to fit the needs of a specific population in various settings. Scientists have been exploring how best to culturally adapt effective programs to a specific environment (such as a rural environment) and population (only boys, for example). In the process of adaptation, the program's core elements are maintained to ensure the effectiveness of the intervention, while addressing the community's needs. Several research-based adapted programs are now available, such as the **Life Skills Training Program** for inner-city minority youth.

For programs that have not yet been adapted and studied in a research protocol, it is best to implement the program as designed to ensure the most effective outcomes. Implementation refers to how the program is delivered, including the number of sessions, methods used, and program followup. Research has found that *how* a program is implemented can determine its effectiveness in preventing drug abuse.

Use of interactive methods and appropriate booster sessions helps to reinforce earlier program content and skills to maintain program benefits.

How can the community implement and sustain effective prevention programs?

After considering risk and protective factors within the community and selecting and adapting prevention programs to address those risks, the community must begin to implement those programs. In many communities, coalitions formed during the community planning process remain involved in overseeing program implementation. They continue to review progress toward goals and objectives set out in the community plan. Responsibility for actual implementation, however, generally resides within the local public or private community-based organization in the educational, social service, or other local system implementing the programs.

To ensure effective implementation, research-based school and family programs often require extensive human and financial resources and a serious commitment to training and technical assistance. In addition to resources, special attention is needed to attract and keep program participants interested and involved in the programs. This is especially important when involving families in rural and poverty settings. Research has shown that extra effort in providing incentives, maximal schedule flexibility, minimal time demands, free meals, transportation, baby-sitting, personal contact, and endorsement from important community leaders all help to attract and retain program participants. In short, how a program is delivered to specific audiences is critical to its success.

How can the community evaluate the impact of its program on drug abuse?

Conducting evaluations of community prevention programs can be challenging. Many community leaders have consulted with university faculty members and other local and State evaluation experts to assist in designing and implementing evaluation procedures.

Ensuring appropriate evaluation design is important because errors can result in findings that do not show a clear relationship between the program and the outcomes. Were the results truly attributable to the program's effects and not some other source, such as other community events or the maturation of the target groups?

An evaluation should identify what was accomplished in the program, how it was carried out, and its effects. To ensure a thorough evaluation, the program implementer and staff should assess ongoing adherence to program elements. Keeping records of content delivered, session attendance, content feedback quizzes, and independent observations of implementation fidelity can help monitor the effectiveness of program implementation and provide key information on why a program is or is not achieving its intended effects.

Evaluation pitfalls can be avoided by consulting with experts who can guide the evaluation design by:

- using tested data-collection instruments;
- obtaining good baseline, or preintervention, information;
- using control or comparison groups who did not receive the intervention, but whose characteristics are similar to those who did receive it;
- monitoring the quality of program implementation;
- ensuring that postintervention followup includes a large percentage of the target population; and
- using appropriate statistical methods to analyze the data.

In addition to assessing program impact, evaluation is an ongoing process that can provide guidance on maintaining the program's responsiveness to changing community needs.

The evaluation process needs to answer questions about the program and its outcomes, including:

- ✔ *What was accomplished in the program?*
- ✔ *How was the program carried out?*
- ✔ *Who participated in it?*
- ✔ *How much of the program was received by participants?*
- ✔ *Is there a connection between the amount of program received and outcomes?*
- ✔ *Was the program implemented as intended?*
- ✔ *Did the program achieve what was expected in the short term?*
- ✔ *Did the program produce the desired long-term effects?*

What are the cost-benefits of community prevention programs?

Research has demonstrated that preventing substance abuse and other problem behaviors can have a net benefit after accounting for costs. In a recent study, Spoth and associates (2002a) performed cost-effectiveness and benefit-cost analyses on data from two long-term interventions already shown to be effective in preventing substance abuse: Iowa Strengthening Families Program (ISFP; now called **The Strengthening Families Program: For Parents and Youth 10–14**), and Preparing for the Drug-Free Years (PDFY; now called **Guiding Good Choices**). Both interventions were found to have net benefits by preventing adult cases of alcohol abuse and thus saving future costs for alcohol abuse treatment. Benefit-to-cost ratios were $9.60 for each dollar invested in prevention for the ISFP group, and $5.85 per dollar invested in prevention for the PDFY group. For each family in the ISFP condition, there was a benefit of $5,923; and the PDFY condition resulted in a benefit of $2,697 per family. In addition, an analysis of the **Skills, Opportunity, And Recognition** (**SOAR**) program had a benefit-to-cost ratio of $4.25 for every dollar spent (Hawkins et al. 1999; Aos et al. 2001). An earlier study (Pentz 1998) found that for every dollar spent on drug abuse prevention, communities could save from $4 to $5 in costs for drug abuse treatment and counseling.

COMMUNITY ACTION BOX

- **Parents** can work with others in the community to use the prevention principles in selecting drug abuse programs.
- **Educators** can incorporate research-based content and delivery into their regular classroom curricula.
- **Community Leaders** can work with evaluation experts to evaluate program progress and develop improvements in outcomes.

Chapter 4: Examples of Research-Based Drug Abuse Prevention Programs

To help those working in drug abuse prevention, NIDA, in cooperation with prevention scientists, presents the following examples of research-based programs that use a variety of strategies proven effective in preventing drug abuse. Each program was developed as part of a research protocol in which an intervention group and a comparison group were matched on important characteristics, such as age, grade in school, parents' level of education, family income, community size, and risk and protective factors. The interventions were tested in a family, school, or community setting, all with positive results. Prevention research continues to identify effective programs and strategies, thus this list is not meant to be exhaustive.

Many of these research-based programs include approaches to identifying early risk factors and addressing them long before a child encounters substance abuse. Whether the intervention focuses on improving teachers' skills in classroom management and academic support or on parents' communication skills, early positive support can reduce risks and increase protection. Also, recent research is focused on adapting interventions to address specific risks by gender, ethnic or racial identification, and geographic settings to improve the effectiveness of programs for specific audiences.

The programs are presented within their audience category (universal, selective, indicated, or tiered) and for whom they are designed (elementary, middle, or high school students). Since these programs are only examples, community planners may wish to explore additional programs and planning resources, which are highlighted in *Selected Resources and References*. With NIDA's continued support of research on effective prevention strategies at all levels of prevention, new research-based programs will continue to be made available in the future.

Universal Programs

Elementary School

Caring School Community Program (Formerly, Child Development Project) (Battistich et al. 1997; U.S. Department of Education 2001). This is a universal family-plus-school program to reduce risk and bolster protective factors among elementary school children. The program focuses on strengthening students' "sense of community," or connection, to school. Research has shown that this sense of community has been pivotal to reducing drug use, violence, and mental health problems, while promoting academic motivation and achievement. The program consists of a set of mutually reinforcing classroom, school, and family involvement approaches. These promote positive peer, teacher-student, and home-school relationships and the development of social, emotional, and character-related skills. The program provides detailed instructional and implementation materials and accompanying staff development.

Contact for Materials and Research:

Eric Schaps, Ph.D.
Caring School Community Program
Developmental Studies Center
2000 Embarcadero, Suite 305
Oakland, CA 94606-5300

Phone: 510-533-0213
Fax: 510-464-3670
E-mail: Eric_Schaps@devstu.org
Web site: www.devstu.org

Classroom-Centered (CC) and Family-School Partnership (FSP) Intervention (Ialongo et al. 2001). The CC and FSP interventions are multicomponent, universal first-grade interventions to reduce later onset of violence and aggressive behavior and to improve academic performance. The CC intervention combines two effective classroom programs, the "Good Behavior Game" and "Mastery Learning," and includes classroom management and organizational strategies, as well as reading and mathematics curricula. The CC intervention also focuses on enhancing teachers' behavior management and instructional skills. The FSP intervention targets the same risk factors of aggression and learning problems, but directly involves parents. It seeks to improve parent-teacher communication, parental teaching, and children's behavior management strategies in the home. Findings show that sixth-graders exposed to the CC intervention in first grade had significantly reduced their aggressive behavior, as compared with control students.

Contact for Materials and Research:

Nicholas Ialongo, Ph.D.
Department of Mental Health
Johns Hopkins Bloomberg
School of Public Health
Johns Hopkins University
624 N. Broadway
Baltimore, MD 21205

Phone: 410-550-3441
Fax: 410-550-3461
E-mail: nialongo@jhsph.edu

Promoting Alternative Thinking Strategies (PATHS) (Greenberg and Kusché 1998). PATHS is a comprehensive program for promoting emotional health and social competencies and reducing aggression and behavior problems in elementary school children, while enhancing the educational process in the classroom. This K–5 curriculum is designed for use by educators and counselors in a multiyear, universal prevention model. Although primarily for use in school and classrooms, information and activities are also included for use with parents. PATHS has been shown to improve protective factors and reduce behavioral risk factors that impact youth problem behaviors. Studies report reduced aggressive behaviors, increased self-control, and an improved ability to tolerate frustration and use conflict-resolution strategies.

Contact for Materials:

Channing Bete Company
One Community Place
South Deerfield, MA 01373-0200

Phone: 877-896-8532
Fax: 800-499-6464
E-mail: PrevSci@channing-bete.com
Web site: www.channing-bete.com

Contact for Research:

Mark T. Greenberg, Ph.D.
Prevention Research Center
Pennsylvania State University
110 Henderson Building-South
University Park, PA 16802-6504

Phone: 814-863-0112
Fax: 814-865-2530
E-mail: mxg47@psu.edu
Web site: www.prevention.psu.edu/PATHS

Contact for Training:

PATHS Training, LLC
Carol A. Kusché, Ph.D.
927 10th Avenue E.
Seattle, WA 98102

Phone and Fax: 206-323-6688
E-mail: ckusche@attglobal.ne

Skills, Opportunity, And Recognition (SOAR) (Formerly, Seattle Social Development Program) (Lonczak et al. 2002; U.S. Department of Education 2001; Hawkins et al. 1999). This universal school-based intervention for grades one through six seeks to reduce childhood risks for delinquency and drug abuse by enhancing protective factors. The multicomponent intervention combines training for teachers, parents, and children during the elementary grades to promote children's bonding to school, positive school behavior, and academic achievement. These strategies are designed to enhance opportunities, skills, and rewards for children's prosocial involvement in school and their families.

Long-term followup results show positive outcomes for participants, including reduced antisocial behavior, misbehavior, alienation and teen pregnancy, and improved academic skills, commitment to school, and positive relationships with people.

Contact for Materials:

Channing Bete Company
One Community Place
South Deerfield, MA 01373-0200

Phone: 877-896-8532
Fax: 800-499-6464
E-mail: PrevSci@channing-bete.com
Web site: www.channing-bete.com

Contact for Research:

J. David Hawkins, Ph.D.
Social Development Research Group
University of Washington
9725 Third Avenue NE, Suite 401
Seattle, WA 98115

Phone: 206-543-7655
Fax: 206-543-4507
E-mail: jdh@u.washington.edu
Web site: www.depts.washington.edu/sdrg

Middle School

Guiding Good Choices (GGC) (Formerly, Preparing for the Drug-Free Years) (Hawkins et al. 1999; Kosterman et al. 1997; U.S. Department of Education 2001; Spoth et al. 2002b). This curriculum was first researched as part of the Seattle Social Development Project at the University of Washington to educate parents on how to reduce risk factors and strengthen bonding in their families. In five 2-hour sessions, parents are shown how to (1) create age-appropriate opportunities for family involvement and interaction; (2) set clear expectations, monitor children, and apply discipline; (3) teach their children peer coping strategies; (4) adopt family conflict management approaches; and (5) express positive feelings to enhance family bonding. Dr. Richard Spoth of Iowa State University independently tested this intervention for rural parents and found the program to be effective in inhibiting alcohol and marijuana use. Special efforts were made to ensure recruitment and retention of study participants.

Contact for Research:

J. David Hawkins, Ph.D.
Social Development Research Group
University of Washington
9725 Third Avenue NE, Suite 401
Seattle, WA 98115

Phone: 206-543-7655
Fax: 206-543-4507
E-mail: jdh@u.washington.edu
Web site: www.depts.washington.edu/sdrg

Contact for Materials:

Channing Bete Company
One Community Place
South Deerfield, MA 01373-0200

Phone: 877-896-8532
Fax: 800-499-6464
E-mail: PrevSci@channing-bete.com
Web site: www.channing-bete.com

Life Skills Training (LST) Program (Botvin et al. 1995, 1997, 2003; U.S. Department of Education 2001). LST is designed to address a wide range of risk and protective factors by teaching general personal and social skills, along with drug resistance skills and normative education. This universal program consists of a 3-year prevention curriculum for students in middle or junior high school. LST contains 15 sessions during the first year, 10 booster sessions during the second, and 5 sessions during the third year. The program can be taught either in grades 6, 7, and 8 (for middle school) or grades 7, 8, and 9 (for junior high schools). LST covers three major content areas: (1) drug resistance skills and information, (2) self-management skills, and (3) general social skills. The program has been extensively tested over the past 20 years and found to reduce the prevalence of tobacco, alcohol, and illicit drug use relative to controls by 50 to 87 percent. When combined with booster sessions, LST was shown to reduce the prevalence of substance abuse long term by as much as 66 percent, with benefits still in place beyond the high school years. Although LST was originally tested predominantly with White youth, several studies have shown that the LST program is also effective

with inner-city minority youth. Moreover, an age-appropriate version of the LST program for upper elementary school students was recently developed and shown to reduce tobacco and alcohol use (Botvin et al. 2003). It contains 24 classes (8 classes per year) to be taught during either grades 3 to 5 or 4 to 6.

Contact for Materials and Training:

National Health Promotion Associates, Inc.
Life Skills Training
711 Westchester Avenue
White Plains, NY 10604

Phone: 914-421-2525
Fax: 914-683-6998
E-mail: LSTinfo@nhpanet.com
Web site: www.lifeskillstraining.com

Contact for Research:

Gilbert Botvin, Ph.D.
Institute for Prevention Research
Weill Medical College of Cornell University
411 East 69th Street, Room 203
New York, NY 10021

Phone: 212-746-1270
Fax: 212-746-8390
E-mail: gjbotvin@.med.cornell.edu

Lions-Quest Skills for Adolescence (SFA) (Eisen et al. 2002; U.S. Department of Education 2001). SFA is a commercially available, universal, life skills education program in use in schools nationwide. A rigorous school-based trial of SFA funded by a NIDA research grant compared the effectiveness of SFA delivered in sixth grade with "standard" drug prevention programs in preventing or delaying the onset of students' tobacco, alcohol, and illegal substance use through middle school. The 40-session version of SFA tested includes social influence and social cognitive approaches to teaching cognitive-behavioral skills for building self-esteem and personal responsibility, communicating effectively, making better decisions, resisting social influences and asserting rights, and increasing drug use knowledge and consequences (Quest International, 3rd edition 1992.) Some of the results after 1 year indicate that exposure to the program can help deter initiation of regular cigarette smoking and marijuana use; these results held across all racial/ethnic groups studied. Additional findings after 2 years indicate lower initiation and regular marijuana use across all groups, as well as lower binge drinking rates among Hispanic students.

Contact for Materials:

Greg Long
Lions-Quest
1984-B Coffman Road
Newark, OH 43055

Phone: 740-522-6405 or 800-446-2700
Fax: 740-522-6580
E-mail: info@lions-quest.org
Web site: www.lions-quest.org

Contact for Research:

Marvin Eisen, Ph.D.
Population Studies Center
The Urban Institute
2100 M Street, NW
Washington, DC 20037

Phone: 202-261-5858
Fax: 202-452-1840
E-mail: meisen@ui.urban.org

Project ALERT (U.S. Department of Education 2001). This drug prevention curriculum is a 2-year, universal program for middle school students that reduces the onset and regular use of substances among youth. The 14-lesson program is designed to prevent drug use initiation and the transition to regular use. It focuses on substances that adolescents typically use first and most widely—alcohol, tobacco, marijuana, and inhalants. Project ALERT uses participatory activities and videos to help students establish nondrug norms, develop reasons not to use, and resist prodrug pressures. The program has prevented marijuana use initiation, decreased current and heavy smoking, curbed alcohol misuse, reduced prodrug attitudes and beliefs, and helped smokers quit. The program has proven successful with high- and low-risk youth from a variety of communities.

Contact for Materials:

G. Bridget Ryan
Project ALERT
725 S. Figueroa Street, Suite 970
Los Angeles, CA 90017

Phone: 800-253-7810
Fax: 213-623-0585
E-mail: info@projectalert.best.org
Web site: www.projectalert.best.org

Contact for Research:

Phyllis L. Ellickson, Ph.D.
Director, Center for Research on
Maternal, Child, and Adolescent Health
The RAND Corporation
1700 Main Street
P.O. Box 2138
Santa Monica, CA 90407-2138

Phone: 310-393-0411
Fax: 310-451-7062
E-mail: Phyllis_ellickson@rand.org
Web site: www.rand.org

Project STAR (Chou et al. 1998; U.S. Department of Education 2001). Project STAR is a comprehensive drug abuse prevention community program with components for schools, parents, community organizations, and health policymakers. An additional component targets mass media to encourage publicizing positive efforts for drug prevention. The middle school component is a social influence curriculum that is incorporated into classroom instruction by trained teachers over a 2-year timetable. In the parent program, parents work with children on homework, learn family communication skills, and get involved in community action. Strategies range from individual-level change, such as teaching youth drug resistance skills, to school and community change, including limiting youth access to alcohol or drugs. Long-term followup studies showed significant reductions in drug use among participants, when compared with adolescents in the community who had not received prevention intervention.

Contact for Materials and Research:

Karen Bernstein, M.P.H.
University of Southern California
Institute for Prevention Research
1000 S. Fremont Avenue, Unit #8
Alhambra, CA 91803

Phone: 626-457-6687
Fax: 626-457-6695
E-mail: Karenber@usc.edu

The Strengthening Families Program: For Parents and Youth 10–14 (SFP 10–4) (Formerly, the Iowa Strengthening Families Program) (Spoth, Redmond, and Shin 2000, 2001). This program offers seven sessions, each attended by youth and their parents. Program implementation and evaluation have been conducted through partnerships that include state university researchers, Cooperative Extension System staff, local schools, and community implementers. Longitudinal study of comparisons with control group families showed positive effects on parents' child management practices (for example, setting standards, monitoring children, and applying consistent discipline) and on parent-child affective quality. In addition, a recent evaluation found delayed initiation of substance use at the 6-year followup. Other findings showed improved youth resistance to peer pressure to use alcohol, reduced affiliation with antisocial peers, and reduced levels of problem behaviors. Importantly, conservative benefit-cost calculations indicate returns of $9.60 per dollar invested in SFP.

Contact for Materials and Research:

Virginia Molgaard, Ph.D.
Prevention Program Development
The Strengthening Families Program:
For Parents and Youth 10–14
Institute for Social and Behavioral Research
Iowa State University
2625 North Loop Drive, Suite 500
Ames, IA 50010-8296

Phone: 515-294-8762
Fax: 515-294-3613
E-mail: vmolgaar@iastate.edu
Web site: www.extension.iastate.edu/sfp/

Contact for Research and Evaluation Information:

Richard Spoth, Ph.D.
c/o Pandora Lamar
Institute for Social and Behavioral Research
Iowa State University
2625 North Loop Drive, Suite 500
Ames, IA 50010-8296

Phone: 515-294-5383
Fax: 515-294-3613
E-mail: rlspoth@iastate.edu; cc: plamar@iastate.edu
Web site: www.projectfamily.isbr.iastate.edu

High School

Life Skills Training: Booster Program. The 3-year LST universal classroom program contains 15 booster sessions during the first year, 10 during the second, and 5 during the third year. See the Life Skills Training description above for background and contact information.

Lions-Quest Skills for Adolescence. (Eisen 2002; U.S. Department of Education 2001). See description above for background and contact information.

Project ALERT Plus. An enhanced version of Project ALERT has been added as a high school component and is being tested in 45 rural communities. See the Project ALERT description above for background and contact information.

The Strengthening Families Program: For Parents and Youth 10–14. (Formerly, the Iowa Strengthening Families Program). See description above for background and contact information.

Selective Programs

Elementary School

Focus on Families (FOF) (Catalano et al. 1999, 2002). A selective program for parents receiving methadone treatment and their children, FOF seeks to reduce parents' use of illegal drugs by teaching them skills for relapse prevention and coping. Parents are also taught how to better manage their families to reduce their children's risk for future drug abuse. The parent training consists of a 5-hour family retreat and 32 parent training sessions of 1.5 hours each. Children attend 12 of the sessions to practice developmentally appropriate skills with their parents. Results from an experimental evaluation of FOF found positive program effects on parents at the 1-year followup, especially in parenting skills, rule-setting, domestic conflict, drug refusal skills, and drug use. At the 1-year assessment, significantly fewer children in the experimental condition reported having stolen something in the previous 6 months. After 2 years of family skills training, positive effects were still evident in parents' drug refusal skills, and positive effects had emerged in parent problemsolving skills in general situations. No statistically significant differences in drug use were found between those in experimental versus control conditions, although the direction of difference still favored experimental participants. Importantly, the strength of program effects on children was substantially stronger at the 2-year followup. Note that the direction of differences on all primary child outcome measures were stronger at the second-year assessment than at the end of the first year. These findings suggest that interventions to prevent relapse among parents and substance abuse among their children may produce immediate, as well as delayed, or "sleeper" effects on targeted risk and protective factors and substance use. The promise of the FOF program is evident in the early reduction in family-related risk factors—*particularly for very high-risk families*—with an overall trend toward positive program effects on child outcomes.

Contact for Materials and Research:

Richard F. Catalano, Ph.D.
Social Development Research Group
9725 Third Avenue, NE, Suite 401
University of Washington
Seattle, WA 98115

Phone: 206-543-6382
Fax: 206-543-4507
E-mail: catalano@u.washington.edu
Web site: depts.washington.edu/sdrg

The Strengthening Families Program (SFP) (Kumpfer et al. 1996, 2002). SFP, a universal and selective multicomponent, family-focused prevention program, provides support for families with 6- to 11-year-olds. The program began as an effort to help drug-abusing parents improve their parenting skills and reduce their children's risk for subsequent problems. It has shown success in elementary schools and communities. Strengthening Families has three components: a behavioral parent training program, children's skills training program, and family skills training program. In each of the 14 weekly sessions, parents and children are trained separately in the first hour. During the second hour, parents and children come together in the family skills training portion. The session begins with families sharing dinner. Barriers to attendance are reduced by providing child care, transportation, and small incentives. This approach has been evaluated in a variety of settings and with several racial and ethnic groups. Spanish-language manuals are available. Primary outcomes include reduced family conflict, youth conduct disorders, aggressiveness, and substance abuse, as well as improved youth social skills, parenting skills, and family communication and organization.

Contact for Materials and Research:

Karol Kumpfer, Ph.D.
University of Utah
Department of Health Promotion
300 S. 1850 E. Room 215
Salt Lake City, UT 84112-0920

Phone: 801-581-7718
Fax: 801-581-5872
E-mail: karol.kumpfer@health.utah.edu
Web site: www.strengtheningfamiliesprogram.org

Contact for Training:

Henry O. Whiteside, Ph.D.
Lutragroup
5215 Pioneer Fork Road
Salt Lake City, UT 84108-1678

Phone: 801-583-4601
Fax: 801-583-7979
E-mail: hwhiteside@lutragroup.com

Middle School

Coping Power (Lochman and Wells 2002). Coping Power is a multicomponent child and parent preventive intervention directed at preadolescent children at high risk for aggressiveness and later drug abuse and delinquency. The child component is derived from an anger coping program, primarily tested with highly aggressive boys and shown to reduce substance use. The Coping Power Child Component is a 16-month program for fifth- and sixth-graders. Group sessions usually occur before or after school or during nonacademic periods. Training focuses on teaching children how to identify and cope with anxiety and anger, controlling impulsiveness; and developing social, academic, and problemsolving skills at school and home. Parents are also provided training throughout the program. Results indicate that the intervention produced relatively lower rates of substance use at postintervention than seen among the controls. Also, children of families receiving the Coping Power child and parent components significantly reduced aggressive behavior, as rated by parents and teachers.

Contact for Materials and Research:

John E. Lochman, Ph.D.
Department of Psychology
University of Alabama
P.O. Box 870348
Tuscaloosa, AL 35487

Phone: 205-348-7678
Fax: 205-348-8648
E-mail: jlochman@gp.as.ua.edu

High School

Adolescents Training and Learning to Avoid Steroids (ATLAS) (Goldberg et al. 2000). ATLAS is a multicomponent selective program for male high school athletes, designed to reduce risk factors for use of anabolic steroids and other drugs, while providing healthy sports nutrition and strength-training alternatives to illicit use of athletic-enhancing substances. Coaches and peer teammates facilitate curriculum delivery with scripted manuals in small cooperative learning groups, taking advantage of an influential coaching staff and the team atmosphere where peers share common goals. Seven 45-minute classroom sessions and seven physical training periods involve role-playing, student-created campaigns, and educational games. Instructional aids include pocket-sized food and exercise guides and easy-to-follow student workbooks. Parents are involved through parent-student homework and are given the booklet, *Family Guide to Sports Nutrition*. Attitudes and alcohol and illicit drug use, as well as nutrition behaviors and exercise self-efficacy, remained significantly healthier among ATLAS program participants at a 1-year followup.

Contact for Materials:

Division of Health Promotion
and Sports Medicine
Oregon Health & Science University

Phone: 503-494-7900
Web site: www.ohsu.edu/som-hpsm/atlas.html

Contact for Research:

Linn Goldberg, M.D., FACSM
Division of Health Promotion
and Sports Medicine
Oregon Health & Science University
3181 SW Sam Jackson Park Road
Portland, OR 97201-3098

Phone: 503-494-8051
Fax: 503-494-1310
E-mail: goldberl@ohsu.edu
Web site: www.atlasprogram.com

Indicated Programs

High School

Project Towards No Drug Abuse (Project TND) (Sussman et al. 2002). This indicated prevention intervention targets high school age youth who attend alternative or traditional high schools. The goal is to prevent the transition from drug use to drug abuse, considering the developmental issues faced by older teens, particularly those at risk for drug abuse. At the core of Project TND is a set of 12 in-class sessions that provide motivation and cognitive misperception correction, social and self-control skills, and decisionmaking material targeting the use of cigarettes, alcohol, marijuana, and hard drugs and violence-related behavior, such as carrying a weapon. The classroom program has been found to be effective at 1-year followup across three true experimental field trials. The 12-session version is effective across outcome variables, and many effects are maintained at 2-year followup.

Contact for Materials and Research:

Steve Sussman, Ph.D., FAAHB
Institute for Health Promotion
and Disease Prevention Research
Departments of Preventive Medicine
and Psychology
University of Southern California
1000 S. Fremont Avenue, Unit 8
Building A-4, Room 4124
Alhambra, CA 91803

Phone: 626-457-6635
Fax: 626-457-4012
E-mail: ssussma@hsc.usc.edu

Reconnecting Youth Program (RY) (Eggert et al. 1995, 2001; Thompson et al. 1997). RY is a school-based indicated prevention program for high school students with poor school achievement and potential for dropping out. Participants may also show signs of multiple problem behaviors, such as substance abuse, depression, aggression, or suicidal behaviors. Students are screened for eligibility and then invited to participate in the program. The program goals are to increase school performance, reduce drug use, and

learn skills to manage mood and emotions. RY blends small group work (10–12 students per class) to foster positive peer bonding, with social skills training in a daily, semester-long class. RY skills, taught by an RY specially trained teacher or group leader, include self-esteem enhancement, decisionmaking, personal control, and interpersonal communication. Early experiments have shown that participation in RY improved school performance (20-percent increase in GPA), decreased school dropout, reduced hard drug use (by 60 percent), and decreased drug use control problems, such as adverse consequences and progression to heavier drug use. Recent studies of a refined RY program model (with skills training on depression and anger management and increased monitoring of drug use) have found greater decreases in hard drug use, depression, perceived stress, and anger control problems.

Contact for Materials:

Reconnecting Youth: A Peer Group Approach
to Building Life Skills (Revised Edition)
National Educational Service
304 West Kirkwood Avenue, Suite 2
Bloomington, IN 47404

Phone: 800-733-6786 or 812-336-7790
Fax: 812-336-7790
E-mail: nes@nesonline.com
Web site: www.nesonline.com

Contact for Research and Program Evaluation:

Jerald R. Herting, Ph.D.
Reconnecting Youth Prevention
Research Program
Psychosocial and Community Health
University of Washington School of Nursing
9709 Third Avenue NE, Suite 510
Seattle, WA 98115

Phone: 206-543-3810 or 206-616-6478
Fax: 206-221-3674
E-mail: herting@u.washington.edu
Web site: www.son.washington.edu/department/pch/ry

Contact for Training:

Leona L. Eggert or Liela J. Nicholas,
Program Developers
Reconnecting Youth Prevention Programs

Phone: 425-861-1177
Fax: 425-861-8071
E-mail: RYprog@verizon.net

Tiered Programs

Elementary School

Early Risers "Skills for Success" Risk Prevention Program (August et al. 2001; August et al. 2002; August et al., in press). Early Risers is a selective, multicomponent, preventive intervention for children at heightened risk for early onset of serious conduct problems, including licit and illicit drug use. The program's focus is on elementary school children with early aggressive behavior. It is designed to deflect children from the "early starter" developmental pathway toward normal development by effecting positive change in academic competence, behavioral self-regulation, social competence, and parent investment in the child. Early Risers has two broad components: CORE, a set of child-focused intervention components delivered continuously in school and over the summer for 2 or 3 years, implemented in tandem with FLEX, a family support and empowerment component tailored to meet family-specific needs and delivery through home visits. Recent findings reveal that program participants showed greater gains in social skills, peer reputation, prosocial friendship selection, academic achievement, and parent discipline than did controls.

Contact for Materials and Research:

Gerald J. August, Ph.D.
Division of Child and Adolescent Psychiatry
University of Minnesota Medical School
P256/2B West, 2450 Riverside Avenue
Minneapolis, MN 55454-1495

Phone: 612-273-9711
Fax: 612-273-9779
E-mail: augus001@tc.umn.edu

Fast Track Prevention Trial for Conduct Problems (Conduct Problems Prevention Research Group 2002c). Fast Track is a comprehensive preventive intervention for young children at high risk for long-term antisocial behavior. Based on a developmental model, the intervention includes a *universal* classroom program (adapted from the PATHS curriculum) for high-risk children selected in kindergarten; it also includes training for parents. Children receive social skills training, academic tutoring, and home visits to improve

academic and social competencies and reduce problems. In first grade, the classroom intervention builds skills in (1) emotional understanding and communication, (2) friendship, (3) self-control, and (4) social problemsolving. The *selective* intervention reaches parents and children at higher risk for conduct problems. Parenting strategies provide skills to support school adjustment, improve the child's behavior, build parents' self-control, promote appropriate expectations for the child's behavior, and improve parent-child interaction. By the end of third grade, 37 percent of the intervention group were free of serious conduct problems, compared with 27 percent of the control group.

Contact for Materials and Research:

Conduct Problems Prevention
Research Group
Karen L. Bierman, Ph.D.
Pennsylvania State University
Prevention Research Center
110 Henderson-Building South
University Park, PA 16802-6504

Phone: 814-865-3879
Fax: 814-865-3246
E-mail: prevention@psu.edu

Middle School

Adolescent Transitions Program (ATP) (Dishion et al. 2002). ATP is a school-based program that uses a tiered approach to provide prevention services to students in middle and junior high school and their parents. The *universal* intervention level, directed to parents of all students in a school, establishes a Family Resource Room to engage parents, establish norms for parenting practices, and disseminate information about risks for problem behavior and substance use. The *selective* intervention level, the Family Check-Up, offers family assessment and professional support to identify families at risk for problem behavior and substance use. The *indicated* level, the Parent Focus curriculum, provides direct professional support to parents to make the changes indicated by the Family Check-Up. Services may include behavioral family therapy, parenting groups, or case management services.

Contact for Materials and Research:

Thomas J. Dishion, Ph.D.
University of Oregon
Child and Family Center
195 West 12th Avenue
Eugene, OR 97401

Phone: 541-346-4805
Fax: 541-346-4858

Chapter 5: Selected Resources and References

Below are resources relevant to drug abuse prevention. Information on NIDA's Web site is followed by Web sites for other Federal agencies and private organizations. These resources and the selected references that follow are excellent sources of information in helping communities plan and implement research-based drug prevention programs.

Selected Resources

National Institute on Drug Abuse (NIDA)
National Institutes of Health (NIH)
U.S. Department of Health and Human Services (DHHS)

NIDA's Web site (www.drugabuse.gov) provides factual information on all aspects of drug abuse, particularly the effects of drugs on the brain and body, the prevention of drug abuse among children and adolescents, the latest research on treatment for addiction, and statistics on the extent of drug abuse in the United States. The Web site allows visitors to print or order publications, public service announcements and posters, science education curricula, research reports and fact sheets on specific drugs or classes of drugs, and the *NIDA NOTES* newsletter. The site also links to related Web sites in the public and private sector.

Other Federal Resources

Center for Substance Abuse Prevention (CSAP)
Substance Abuse and Mental Health Services Administration (SAMHSA), DHHS
5600 Fishers Lane
Rockwall 2, 9th Floor, Suite 900
Rockville, MD 20857
Phone: 301-443-9110
www.prevention.samhsa.gov

Centers for Disease Control and Prevention (CDC), DHHS
1600 Clifton Road
Atlanta, GA 30333
Phone: 404-639-3534
Phone: 800-311-3435 (toll-free)
www.cdc.gov

Safe and Drug-Free Schools Program
U.S. Department of Education (DoE)
400 Maryland Avenue, SW
Washington, DC 20202
Phone: 800-872-5327 (toll-free)
www.ed.gov

Drug Enforcement Administration (DEA)
U.S. Department of Justice (DOJ)
2401 Jefferson Davis Highway
Alexandria, VA 22301
Phone: 202-307-1000
www.dea.gov

Knowledge Exchange Network, SAMHSA, DHHS
P.O. Box 42490
Washington, DC 20015
Phone: 800-789-2647 (toll-free)
www.mentalhealth.org

National Clearinghouse for Alcohol and Drug Information (NCADI), SAMHSA, DHHS
Phone: 800-729-6686 (toll-free)
www.ncadi.samhsa.gov

National Institute on Alcohol Abuse and Alcoholism (NIAAA), NIH, DHHS
6000 Executive Boulevard, Willco Building
Bethesda, MD 20892
Phone: 301-443-3860
www.niaaa.nih.gov

National Institute of Mental Health (NIMH), NIH, DHHS
6001 Executive Boulevard, Room 8184, MSC 9663
Bethesda, MD 20892
Phone: 301-443-4513
www.nimh.nih.gov

National Institutes of Health (NIH), DHHS
9000 Rockville Pike
Bethesda, MD 20892
Phone: 301-496-4000
www.nih.gov

National Library of Medicine (NLM), NIH, DHHS
8600 Rockville Pike
Bethesda, MD 20894
Phone: 301-594-5983
Phone: 888-346-3656 (toll-free)
www.nlm.nih.gov

Office of Juvenile Justice and Delinquency Prevention (OJJDP), DOJ
810 Seventh Street
Washington, DC 20531
Phone: 202-307-5911
www.ojjdp.ncjrs.org/pubs/substance.html

Office of National Drug Control Policy (ONDCP)
P.O. Box 6000
Rockville, MD 20849
Phone: 800-666-3332 (toll-free)
www.whitehousedrugpolicy.gov

Substance Abuse and Mental Health Services Administration (SAMHSA), DHHS
5600 Fishers Lane
Rockville, MD 20857
Phone: 301-443-8956
www.samhsa.gov

Other Selected Resources

American Academy of Child and Adolescent Psychiatry (AACAP)
3615 Wisconsin Avenue, NW
Washington, DC 20016
Phone: 202-966-7300
www.aacap.org

American Academy of Family Physicians (AAFP): KidsHealth
11400 Tomahawk Creek Parkway
Leawood, KS 66211
www.familydoctor.org

American Academy of Pediatrics (AAP)
141 Northwest Point Boulevard
Elk Grove, IL 60007-1098
Phone: 847-434-4000
www.aap.org

American Psychological Association (APA)
750 First Street, NE
Washington, DC 20002
Phone: 800-374-2121 (toll-free)
Phone: 202-336-5510
www.apa.org

American Society of Addiction Medicine (ASAM)
4601 North Park Avenue, Arcade Suite 101
Chevy Chase, MD 20815
Phone: 301-656-3920
www.asam.org

Blueprints for Violence Prevention, Center for the Study and Prevention of Violence
Institute on Behavioral Science
University of Colorado at Boulder
900 28th Street, Suite 107
439 UCB
Boulder, CO 80309
Phone: 303-492-1032
www.colorado.edu/cspv/blueprints/

Center on Addiction and Substance Abuse (CASA) at Columbia University
633 Third Avenue, 19th Floor
New York, NY 10017
Phone: 212-841-5200
www.casacolumbia.org

Community Anti-Drug Coalitions of America (CADCA)
901 North Pitt Street, Suite 300
Alexandria, VA 22314
Phone: 800-542-2322 (toll-free)
www.cadca.org

Drug Strategies, Inc.
1150 Connecticut Avenue, NW, Suite 800
Washington, DC 20036
Phone: 202-289-9070
www.drugstrategies.org

Join Together
One Appleton Street, 4th Floor
Boston, MA 02116
Phone: 617-437-1500
www.jointogether.org

Latino Behavioral Health Institute
P.O. Box 1008
Thousand Oaks, CA 91360
Phone: 213-738-2882
www.lbhi.org

National Asian Pacific American Families Against Substance Abuse (NAPAFASA)
340 East Second Street, Suite 409
Los Angeles, CA 90012
Phone: 213-625-5795
www.napafasa.org

National Criminal Justice Reference Service (NCJRS)
P.O. Box 6000
Rockville, MD 20849
Phone: 800-851-3420 (toll-free)
Phone: 301-519-5500
www.ncjrs.org

National Families in Action (NFIA)
2957 Clairmont Road, NE, Suite 150
Atlanta, GA 30329
Phone: 404-248-9676
www.nationalfamilies.org

National Hispanic Science Network (NHSN)
Center for Family Studies
Department of Psychiatry & Behavioral Sciences
University of Miami School of Medicine
1425 NW 10th Avenue, 3rd Floor
Miami, FL 33136-1024
Phone: 305-243-2340
www.hispanicscience.org

National Prevention Network (NPN)
808 17th Street, NW, Suite 410
Washington, DC 20006
Phone: 202-293-0090
www.nasadad.org/Departments/Prevention/prevhme1.htm

Partnership for a Drug-Free America
405 Lexington Avenue, Suite 1601
New York, NY 10174
Phone: 212-922-1560
www.drugfreeamerica.org

Society for Prevention Research (SPR)
1300 I Street, NW, Suite 250 West
Washington, DC 20005
Phone: 202-216-9670
www.preventionresearch.org

Selected References

The following references have been selected as either summaries of the literature of the past several years or as the latest findings on specific aspects of prevention research, which have been cited in this publication. For a more comprehensive list of research citations, please consult the NIDA Web site at www.drugabuse.gov.

Aos, S.; Phipps, P.; Barnoski, R.; and Lieb, R. *The Comparative Costs and Benefits of Programs to Reduce Crime. Vol. 4* (1-05-1201). Olympia, WA: Washington State Institute for Public Policy, May 2001.

Ashery, R.S.; Robertson, E.B.; and Kumpfer K.L.; eds. *Drug Abuse Prevention Through Family Interventions.* NIDA Research Monograph No. 177. Washington, DC: U.S. Government Printing Office, 1998.

August, G.J.; Realmuto, G.M.; Hektner, J.M.; and Bloomquist, M.L. An integrated components preventive intervention for aggressive elementary school children: The Early Risers Program. *Journal of Consulting and Clinical Psychology* 69(4):614–626, 2001.

August, G.J.; Hektner, J.M.; Egan, E.A.; Realmuto, G.M.; and Bloomquist, M.L. The Early Risers longitudinal trial: Examination of 3-year outcomes in aggressive children with intent-to-treat and as-intended analyses. *Psychology of Addictive Behaviors* 16(43):827–839, 2002.

August, G.J.; Lee, S.S.; Bloomquist, M.L.; Realmuto, G.M.; and Hektner, J.M. Dissemination of an evidence-based prevention innovation for aggressive children living in a culturally diverse, urban neighborhood: The Early Risers effectiveness study. *Prevention Science,* in press.

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