

# CONNECTION

A Newsletter Linking the Users and Producers  
of Drug Abuse Services Research

May 2002

## INVITED COMMENTARY

### Treatment Research on Adolescent Drug and Alcohol Abuse: Despite Progress, Many Challenges Remain

By Michael L. Dennis, Ph.D., Chestnut Health Systems

**A**lthough rates of drug and alcohol use and abuse have stopped growing, they continue to be a serious problem among adolescents (ages 12 to 17) and young adults (ages 18 to 20). From ages 12 to 20 (see Figure 1 on page 2), the rates of past-month use rise dramatically for alcohol (3 percent to 49 percent), tobacco (3 percent to 49 percent), alcohol bingeing (2 percent to 55 percent), illicit drug use (3 percent to 20 percent), and marijuana (1 percent to 18 percent).

From age 21 on, these rates largely decline. Relative to their proportion of the population, adolescents (10 percent) and young adults (5 percent) are more likely to use, have problems, and enter treatment. Of the 6.1 million people who acknowledged using illicit drugs within the past month,

1.1 million (18 percent) were adolescents and 1 million (16 percent) were young adults. Marijuana, in particular, is much more likely to be used by young adults and adolescents than adults (14 percent versus 10 percent versus 3 percent). Among past-month users, about 10 percent of adolescents and 38 percent of young adults reported being drunk or having five or more drinks of alcohol in one sitting, compared to 19 percent of adults.

The younger a person is at onset of substance use, the more likely he or she is to develop a substance use disorder *and* to continue that disorder through adulthood. More than 90 percent of adults with current substance use disorders started using before age 18, and half began using before age 15. Of the 2.1 million people meeting criteria for alcohol or

drug dependence in 1999, 791,581 (22 percent) were adolescents and 771,256 (21 percent) were young adults. It is estimated that there are an additional two to three times as many adolescents meeting criteria for abuse or using weekly or more often.

As the rates of weekly or more frequent use of alcohol, marijuana, and other drugs doubled from 1992 to 1998, the number of adolescents entering the U.S. public treatment system increased by more than 53 percent. Of the 1,523,149 people entering the public treatment system in 1999, 131,625 (9 percent) were adolescents and 99,553 (7 percent) were young adults. Yet this is only one in five of those with dependence and only one in 10 of young people who could

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## EDITOR'S NOTE

**A**dolescents and young adults who abuse drugs and alcohol have problems and treatment needs unique from those of other populations. This issue of *Connection* explores issues specific to adolescent substance abuse and the progress that services research is making in addressing them.

In the Invited Commentary, Michael Dennis of Chestnut Health Systems describes recent trends among young substance abusers, explains how they are different from

substance-abusing adults, and charts some of the advances in treatment research and practice.

Sarah Duffy of SAMHSA provides a report on treatment facilities that offer programs for adolescents, based on new data from SAMHSA's National Survey of Substance Abuse Treatment Services.

In a Research Review article, Howard Liddle of the University of Miami School of Medicine discusses the enormous strides that research in this field has made recently and how it has affected substance abuse

treatment for adolescents.

Finally, David Pollio of Washington University offers his recommendations for ensuring quality treatment for adolescents through training and certification of providers.

We hope that you find this issue of *Connection* interesting and informative.

**Constance Horgan, Sc.D.**  
Chairman, Editorial Board

**Mary Darby**  
Editor

probably benefit from treatment. This is at least in part because many communities have inadequate or no resources targeted at treating adolescent substance use disorders.

From the 1930s narcotic farms at Lexington, Ky., and Fort Worth, Tex. (which originally were targeted at adolescents), to community-based programs in the 1960s and 1970s, adolescents were largely co-mingled with adults in treatment and treated with “adult” model programs. Not only did this practice prove to be ineffective, but it was actually associated with increases in substance abuse.

## How Adolescents Differ From Adults

We have learned that working with adolescent substance users is very different than working with adults — for a number of reasons. In the first place, they use different drugs — much more marijuana and alcohol — than adults. Second, they have different patterns of use than adults, with higher rates of binge and opportunistic use. Third, adolescents have lower problem recognition and high rates of co-occurring internal problems, like depression, anxiety, and traumatic distress, as well as high rates of external problems, such as

attention deficit, hyperactivity, conduct disorder, crime, and violence. Finally, adolescents are also more likely than adults to be involved in and under pressure from many different systems of influence, including family, peers, school, welfare, and criminal justice.

## Many communities have inadequate or no resources targeted at treating adolescent substance use disorders.

Adolescence is also a period of overlapping developmental changes. Biological changes occur in the body, brain, and hormonal systems into the mid to late 20s. Cognitively, adolescents are shifting from concrete to abstract thinking and improving their ability to link causes and consequences, particularly strings of events over time.

As young people attempt to separate from a family-based identity, they often enter a period of peer-based identity on the road to an individual-based identity. Increasing rates of sensation-seeking — “trying new things” — are ideally offset by the development of impulse control

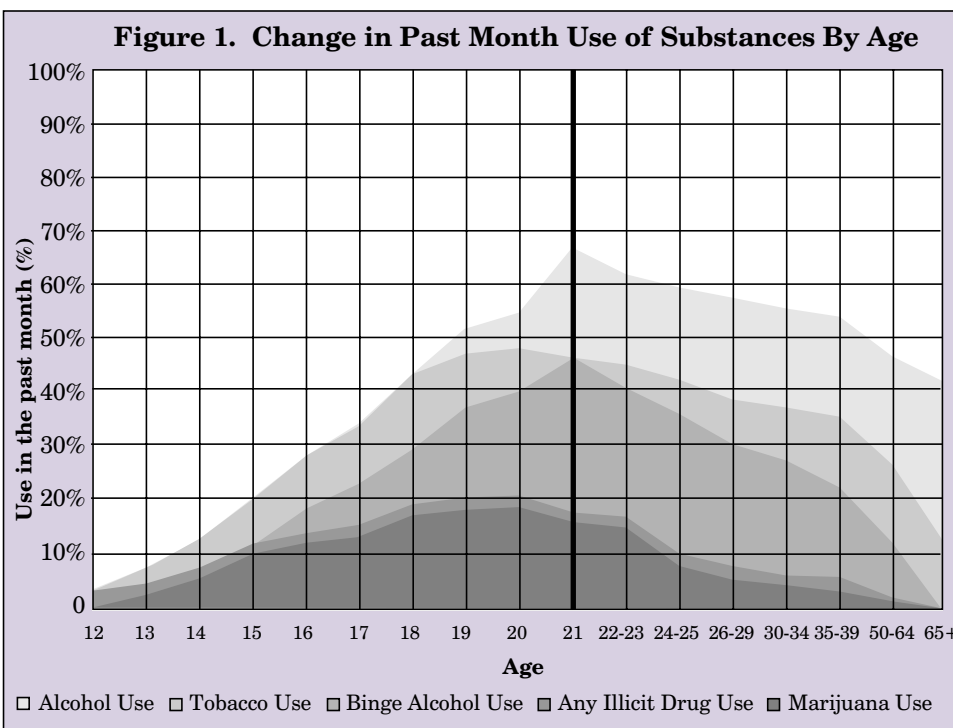
and coping skills. While they are rarely worried about distant effects — such as developing HIV or cancer — they are motivated by concerns about avoiding imminent emotional or physical violence.

Because of all these key differences between adults and adolescents, treatment for substance-abusing adolescents has to be extensively adapted to meet their needs and interests. It is also important to recognize that adolescents often have little control of their recovery environment and frequently have limited access to after-care, 12-step groups, and social support.

## Advances in Treatment Research and Practice

On the bright side, we are entering a renaissance of research on drug and alcohol abuse treatment for adolescents. In fact, this has become a rapidly growing field of research unto itself. The number of studies evaluating formal substance abuse treatment programs for adolescents doubled from 1997 to 2001 and promises to double again within the next three years. There are more adolescent treatment studies in the field now than were completed in the field’s history through 1997. We’ve seen major methodological advances in screening and assessment, placement, manual-guided approaches for targeted interventions and for more comprehensive program management that can be easily disseminated, treatment engagement and retention, recovery management, follow-up and outcome assessment, and economic analysis, as well as organizational changes in treatment delivery and financing systems.

Several efforts are underway to identify and document effective models of adolescent treatment in manuals so that they can be replicated in communities throughout the country. Within the next two years, we will see nearly two dozen new manual-guided therapies supported by research-based effectiveness, cost, and benefit-cost data. As we move into this new arena, it is clear that there are major differences in treatment settings (e.g., outpatient, short-term



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## DATA PROFILE

### SAMHSA Survey Shows Prevalence, Characteristics of Treatment Facilities That Offer Programs for Adolescents

By Sarah Q. Duffy, Ph.D., Office of Applied Studies, SAMHSA

**M**ost adolescents with substance abuse problems in treatment are admitted to facilities that offer programs specifically designed to meet the needs of this population, according to data from a national survey conducted by the Substance Abuse

and Mental Health Services Administration (SAMHSA). Recent research suggests that such programs result in better outcomes for substance-abusing adolescents.

SAMHSA's National Survey of Substance Abuse Treatment Services (N-SSATS) is part of the Drug Abuse

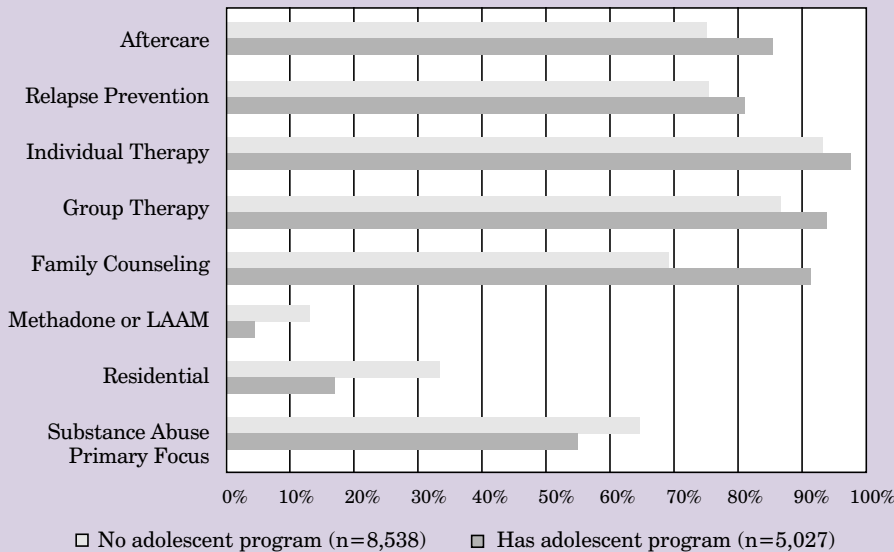
Services Information System maintained by the Office of Applied Studies at SAMHSA. N-SSATS is an annual survey of all facilities (other than those in correctional institutions) providing substance abuse treatment throughout the 50 United States, the District of Columbia, and other U.S. jurisdictions. N-SSATS contains information on facility characteristics, including special programs offered, and the number and types of clients in treatment on or near October 1 of each year.

According to N-SSATS, almost 85,000 adolescents were in treatment on October 1, 2000, representing about 8 percent of the treatment population on that date. Of those, 86 percent were being treated in one of the approximately 5,000 facilities nationwide that reported having a special program for adolescents. These facilities account for approximately 37 percent of all substance abuse treatment facilities reporting to N-SSATS.

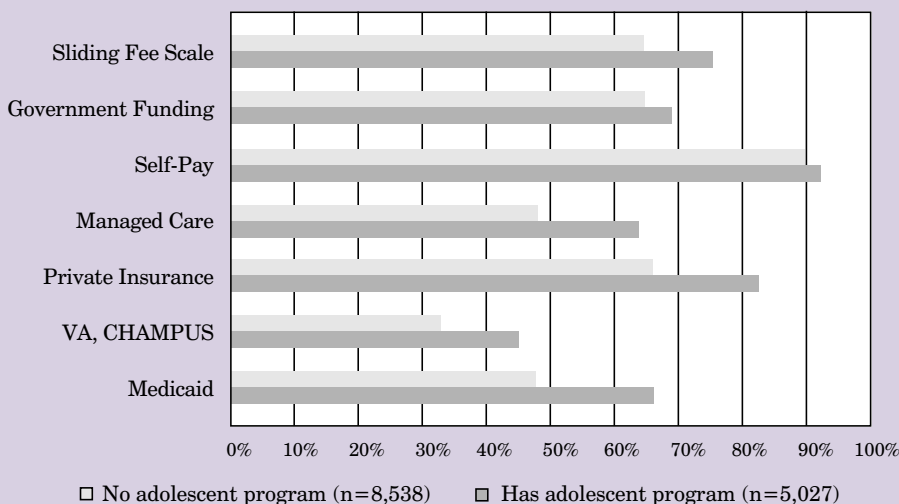
In some respects, facilities with adolescent programs are very similar to those without such programs. For example, in each case, almost 60 percent of the facilities are private, non-profit entities, and only about 25 percent of their clients, on average, are in treatment for alcohol problems only. Nearly 79 percent of both types of facilities report providing drug or alcohol urine testing.

In other key respects, however, facilities with special programs for adolescents differ from facilities without such programs. First, they tend to be somewhat larger. Facilities with adolescent programs reported having on average approximately 93 clients in treatment on October 1, 2000, compared with 76 in facilities without such programs. Second, they tend to be more prevalent in the Central and Western regions of the country. In those regions, almost 39

**Figure 1. Facility Services by Adolescent Program Status, 2000**



**Figure 2. Financing Arrangements Among Facilities With and Without Programs for Adolescents, 2000**



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## The Research Renaissance in Adolescent Substance Abuse Treatment

By Howard A. Liddle, Ed.D., Center for Treatment on Adolescent Drug Abuse  
University of Miami School of Medicine

**R**esearch on adolescent substance abuse has emerged from the shadows of the adult drug abuse field and come into its own. Policy makers, treatment providers, and funding agencies now recognize that this area of research has a unique identity, conceptual framework and theory, clinical focus, and research tradition — and they have become more interested than ever in supporting research on adolescent substance abuse.

This interest has been spurred in part by the magnitude of the continuing problem of adolescent substance abuse, and its far-reaching public health implications, and in part by a growing awareness that adolescent substance abuse is best understood as a set of complex, multi-level behaviors. There are multiple pathways into the development of drug-taking and drug abuse, and there are multiple consequences to it as well, involving many aspects of the teen's functioning. The disorder itself is

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**A teen's drug problems are usually preceded by conduct problems and difficulties in many life areas.**

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heterogeneous. As some have found with alcoholism, drug abuse among adolescents can take many forms. Basic science advances in diagnostic and classification methods, assessment, and human development have made treatment more informed in one sense, but more complex and challenging in many other ways.

The developmental perspective and the use of developmental knowledge to guide our understanding of adolescent problem behaviors, and adolescent substance abuse in particular,

have transformed the specialty. Today, providers and researchers can base their work on specific developmental knowledge derived from research in specialties such as developmental psychology and psychopathology.

We know, for example, that adolescent substance abuse co-occurs with other problems quite frequently. In fact, co-morbidity is the norm in most clinical samples of drug-abusing teenagers. Interpersonal difficulties, family, school, and legal problems are more often the rule than the exception. The temporal or sequential nature of how these problems develop over time has become clear as well. A teen's drug problems are usually preceded by conduct problems and difficulties in many life areas, including relations with peers, problems in the family, and other developmental lags and difficulties.

We also know that individual-level factors, including difficulties in executive cognitive functioning and emotion regulation, such as impulsivity and sensation-seeking interact synergistically with familial and environmental circumstances to increase the risk of a teen developing drug problems. As the number of risk factors increases, the probability of a teen developing drug and other problems increases as well.

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### A Sea Change in Treatment

These types of knowledge-building advances in the basic science of adolescent substance abuse and related problem behaviors have provided the foundation for the enormous changes in treatment development and research seen in recent years. While the policy implications of these changes have yet to be fully realized, there is no doubt that contemporary treatments for substance-abusing teens, particularly family-based treat-

ments, are remarkably different from earlier treatments.

Contemporary adolescent treatments are now quite specialized. They target specific research-derived risk factors. Behaviors and contextual circumstances known to be strongly related to the development of drug and other problems include such things as the quality of the parent-teen relationship, particular parenting practices, the day-to-day family environment, and the parents' own history of substance use and mental health issues. All of these are potential targets for intervention in the quest to change a teen's drug-taking.

In the context of these developments, contemporary adolescent treatments have become quite comprehensive in scope. This reflects the growing belief in the field that multi-component treatments are needed to address the many interconnected areas of impairment found in the lives of most clinically referred teens. These comprehensive models might prove to be particularly appropriate or effective with the most advanced forms of adolescent dysfunction, including substance abuse disorders with co-morbid features. But more research will be needed to confirm this, and identify the other factors that shape a teen's treatment needs and responses.

The clinical usefulness of the risk factor research base is only part of the story about how treatments for adolescent drug abuse have evolved. Today's adolescent treatment models incorporate knowledge about protective factors as well as risk factors. Protective factors are those characteristics and circumstances that combat the harmful and development-detouring processes involved in teen drug abuse. Such factors include success in school, affiliation with non-using

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## Liddle

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peers, healthy family relations, and the development-facilitating role of pro-social recreational activities (and the relationships that these activities foster). Recognition of these protective factors has also transformed how treatment models generally and how interventions, in particular, are conceived, developed, and tested.

Contemporary adolescent drug treatment directly targets drug-taking behaviors and the attitudes and beliefs that support these behaviors. However, these therapies also target indirect contributors to everyday drug use and abuse. And these problems, beyond their role as contributors to drug problems, can create other serious deficiencies for teenagers, with long-term developmental consequences if left untreated or unimproved. Thus, interventions have become more comprehensive and ambitious in their assessment scope, as well as in the multisystemic outcomes they seek to achieve.

## Research Explores Many Areas

Clinical research on adolescent drug abuse is multifaceted. Much of that research has obviously focused on treatment outcome. To date, there is considerable support for the efficacy of particular family-based therapies for teen drug problems. Several reviews have concluded that family-based therapies are among the most efficacious treatments for drug-using teens. But the efficacy evidence is still accumulating on family-based and other therapies for teen drug problems, and it is premature to declare one modality consistently superior in outcomes.

Understanding what types of treatment work best for whom is only one question occupying the interest of adolescent substance abuse researchers. There is also the question of how treatment achieves its effects and what factors enhance or diminish those effects. Process research has illuminated the interior of therapy for drug-using teens, indi-

cating, for instance, how parenting changes can interact with changes in drug use of the teen, and how family conflict or a teen's reluctance to engage in therapy can be transformed on the basis of specific, manual-guided therapist behaviors.

Studies have also been done on the predictors and increasingly on the mediators of treatment outcome. Some of these studies support the connection between behavioral changes in family functioning and changes in the substance abuse of the teen. Other studies have specified the kinds of post-residential care environments (non-using peers, supportive family, success in school or job) that best support a teen's recovery. Large-scale evaluation studies reveal that, on average, outpatient treatment outcomes have improved during the past decade. Unfortunately, dropout rates are still too high, and relapse to drug use is not uncommon.

Overall, however, many advances have been made in adolescent drug abuse treatment and research. State-of-the-science treatments have been shown to impact the drug abuse of teens (for example, reductions of more than 50 percent in drug use), and change important aspects of the teen's environment (family, connection to school). Treatments can maintain these kinds of effects, in many cases for a year or more beyond the termination of relatively short-term therapy programs (outpatient, once a week, for four to five months).

At the same time, as is often the case, the more we learn, we also realize the more we need to know. Clinically complicated teens have a harder time benefiting from treatment, although we do not yet know if this is because the treatments are not yet sufficiently complex to intervene in all of the necessary ways. Adolescents who are involved in the juvenile justice system need specialized and far-reaching services in addition to the core treatment interventions that typically are provided and target drug use and other individual and family problems.

Individually tailored treatments that are culturally or ethnically sensitive or gender-specific are at an early stage of development.

Although there is evidence that culturally specific therapies can be advantageous in some respects (in terms of treatment engagement for instance), we do not know if these therapies can enhance bottom-line outcomes (such as drug abuse) with diverse subgroups of teens.

## Contemporary adolescent drug treatment directly targets drug-taking behaviors and the attitudes and beliefs that support these behaviors.

The frequently referenced research-to-practice gap has numerous manifestations. One of the most pernicious of these concerns how infrequently science-based therapies appear in regular clinical settings. Among the most complicated but important challenges that lie ahead is the transportation of research-derived therapies to regular clinical settings. Although we have learned much about the circumstances and processes that have contributed to failed treatment dissemination and technology transfer efforts in the past, this knowledge will only help so much.

True progress will not be achieved until we make new attempts to transport empirically supported therapies to real-world settings, and to systematically evaluate the effects on practitioners. Much is at stake in this regard. The full potential of research breakthroughs cannot be gained until empirically supported therapies are adapted, tested, and, if necessary, refined for use in everyday clinical settings.

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## TREATMENT

## States Need to Ensure Expertise of Adolescent Treatment Providers Through Training and Certification

By David E. Pollio, Ph.D., Comorbidity and Addictions Center,  
George Warren Brown School of Social Work, Washington University

**I**n its recently released National Household Survey on Drug Abuse, the Substance Abuse and Mental Health Services Administration documented the increasing need for drug abuse treatment in adolescents, as well as the serious shortfall in treatment received. The study served as further confirmation of what providers have known all along — that intervention with adolescents represents a critical gap in our provision of addiction services.

Yet this conclusion, important as it may be, yields an equally significant follow-up question: Do we in fact have a provider base that is sufficiently trained to cope with the issues specific to treating addictions in adolescents?

To begin to answer this question, I conducted a survey of state licensure requirements for substance abuse counselors and program certification standards, searching specifically for material related to adolescent intervention. By identifying core knowledge requirements for licenses, I thought to build upon the state of the art in describing needs for professionals and programs treating this population.

To collect this information, I contacted all state licensure boards and obtained information on requirements for certification as a substance abuse counselor or equivalent credential. I also asked the licensure boards about separate certifications or other specialized credentials related to youth treatment. All credentials were examined for material specific to youth and adolescents, including materials on families and human development.

Finally, I identified available program certification standards from state departments (addiction, mental health, or health, depending on the

state) and examined them for content of adolescent-focused programs.

The results of this survey surprised me. Only five state licenses included any knowledge requirements specific to treating youth and adolescents. No state offered provider certification specifically for adolescents. In two states, licensing requirements addressed knowledge concerning human development. Two other states included knowledge of family counseling or family education in their licensing requirements, and a fifth included both.

Most states, however, had in place program certification requirements that detailed essential elements for providing quality treatment to underage populations. Most of those requirements clearly spelled out how services for adolescents were to be distinguished from those offered to adults.

### Division Between Programs and Professionals

These findings present a rather startling dichotomy in the specificity of certification standards between treatment programs and the professionals providing the interventions. A good example of this disconnect comes from my home state of Missouri, where the Division of Alcohol and Drug Abuse has set forth detailed program certification requirements on addiction treatment for adolescents. In addition, the state requires treatment professionals to be certified in substance abuse counseling *and* to have experience working with adolescents.

However, these professionals are not specifically required to have expertise in addiction treatment *with* adolescents. So a person who has worked with adolescents in any role and then

moves on to working with addicted adults and gets a license could be viewed by the state as an “adolescent substance abuse treatment” expert.

This setup allows a huge latitude for children to be treated by individuals working outside of their expertise. Yet it appears to represent the overwhelming norm in service provision.

The conclusion from this analysis is clear. Credentials for providers treating youth and adolescents must include a formal, linked competency in drug abuse and adolescent treatment — making explicit the linkage between the two areas that is currently implicit in most states’ program certification requirements.

### Do we have a provider base that is sufficiently trained to cope with the issues that are specific to treating addictions in adolescents?

There are two ways to do this. In the first alternative, current licenses for all treatment professionals would require competencies in adolescent treatment. But this solution seems impractical, given the large amount of information professionals would need to absorb that they may or may not use in their jobs. More sensibly, either a separate credential would be created unique to treating adolescent drug abusers or a specialized certificate of training would be developed as an additional requirement for currently licensed professionals. This process would require certification of new providers and

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## Pollio

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additional training for those currently licensed. A specialized credential makes even more sense in light of the dramatic differences in addiction patterns and treatment needs between adult and adolescent populations.

### Setting Forth Training Needs

In creating this specialized credential, specific training needs to be identified. A partial list drawn substantially from the Center for Substance Abuse Treatment's Treatment Improvement Protocol Series includes:

- Individual development, including focus on biological, psychological, and social aspects.
- Addiction patterns in adolescents, including attention to differences between adults and adolescents.

- Family systems, including attention to family interventions.
- Drug use assessment and treatment specific to this population, including knowledge related to treatment choices and effectiveness.
- Legal and ethical issues unique to adolescents, including attention to consent, juvenile justice, and coerced treatment.
- The impact of diversity, including attention to race, ethnicity, sexual orientation, and socioeconomic status.

To meet the treatment needs of adolescents coping with drug abuse, many researchers and policy makers have called for increases in levels of available services, development of additional effective intervention models, and attention to the ever-present need for appropriate prevention models.

But we also need to pay greater attention to the professionals who provide treatment for this unique

population and ensure that they have the appropriate training and expertise. This means an overhaul of our certification and licensing requirements to guarantee that people who provide drug abuse treatment for children are truly qualified to do this work. It is not enough to offer services if the individuals providing them do not have the knowledge required to implement them effectively.

## Correction

An article on page 7 of the October 2001 issue incorrectly reported that SAMHSA's Center for Substance Abuse Prevention is funding a particular initiative of the Washington Business Group on Health. The Center for Substance Abuse Treatment is funding the initiative. We apologize for the error.

## Dennis

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residential, long-term residential treatment) in terms of both the patients they serve and the services they provide. However, because most people go in and out of several types of treatment, these distinctions are often blurred over time.

Although research often focuses on interventions that are in theory very specific — such as 12-step programs, behavioral therapies, family therapies, therapeutic communities — in practice, treatment providers frequently blend several approaches. More than half of adolescent admissions in most states are in agencies that provide services across a continuum of care, with multiple levels of care or sites. We are also increasingly recognizing that substance use is just one of several problems that an adolescent may have and that it is important for treatment providers

to form partnerships with local school, welfare, health, and juvenile justice systems. Such organizational outreach is essential because — unlike adults — few adolescents refer themselves to treatment.

To treat substance-abusing adolescents effectively, we must have available a critical mass of basic and applied research knowledge about adolescent substance use and abuse and treatment, and we must communicate and facilitate developments to and throughout the field. For these reasons, the Society for Adolescent Substance Abuse Treatment Effectiveness (SASATE) was formed this year. With support from federal, local, and non-profit agencies, including the Center for Substance Abuse Treatment, the National Institute on Alcohol Abuse and Alcoholism, the National Institute on Drug Abuse, and The Robert Wood Johnson Foundation, this multi-disciplinary group of researchers, trainers, providers, and consumers hopes to promote the

development, evaluation, and implementation of effective models of adolescent substance abuse treatment.

Over the years, we have learned a great deal about treating drug and alcohol abuse in young people. We need to make the most of the knowledge that we have and continue to develop new knowledge.

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Substance Abuse and Mental Health Data Archive Online Analysis of 1999 National Household Survey on Drug Abuse (NHSDA) and Treatment Episode Data Set (TEDS) data. Available at <http://www.icpsr.umich.edu/SAMHDA/das.html>.

*For complete references or further information on SASATE, contact the author at [mdennis@chestnut.org](mailto:mdennis@chestnut.org).*

## Duffy

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percent of facilities report having a program for adolescents, compared with 33 percent in the South and 36 percent in the East. Third, although they report offering roughly the same number of services and programs, on average, as facilities without adolescent programs, the mix appears to be somewhat different.

Figure 1 on page 3 shows that facilities with a program for adolescents are more likely to also offer several services, most notably family counseling. These facilities are, however, less likely to offer methadone or LAAM therapy or treatment in a residential setting. A lower proportion of facilities that offer programs for adolescents have substance abuse treatment as their main focus (as opposed to mental health or other services), compared with facilities that do not offer such programs.

Facilities with programs for adolescents also appear to rely on a different mix of funding sources than facilities without such programs. Figure 2 on page 3 shows that facilities with programs for adolescents are more likely than other facilities to accept funding from a variety of sources, most notably private insurance, managed care organizations, and Medicaid.

A recent analysis of another SAMHSA data set, the Treatment

Episode Dataset (TEDS), describes trends among adolescent admissions to treatment between 1993 and 1998. During that period, the number of adolescents entering treatment increased 46 percent, the analysis shows. The increase appears to have been driven by marijuana-involved admissions referred through the criminal justice system. By 1998, 76 percent of youths admitted to treatment used marijuana as either a primary or secondary drug, compared with only 57 percent in 1993. During the same time period, the proportion of adolescent admissions referred to treatment by the criminal justice system increased from 39 percent to 49 percent, while the proportion of admissions referred through other sources remained for the most part constant.

The TEDS report, and other reports based on SAMHSA data can be obtained at [www.drugabusestatistics.samhsa.gov](http://www.drugabusestatistics.samhsa.gov). Public use versions of the SAMHSA data files may be obtained and analyzed at the Substance Abuse and Mental Health Data Archive at [www.icpsr.umich.edu/SAMHDA/](http://www.icpsr.umich.edu/SAMHDA/).

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A Newsletter Linking the Users and Producers of Drug Abuse Services Research

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