

Regular article

Characterizing substance abuse programs that treat adolescents

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Abstract

Few systematic studies have examined the characteristics of substance abuse treatment programs serving adolescents. An expert panel recently identified nine key elements of effective adolescent substance abuse treatment. We measured the percentage of treatment programs in the United States with at least 10 adolescent clients on a given day that reported these elements using data from the 2003 National Survey of Substance Abuse Treatment Services. This first look into the characteristics of facilities serving significant numbers of adolescents indicates that many facilities may be lacking in components considered important. The most significant measured potential areas for improvement occurred in the areas of including mental health as well as medical issues in comprehensive assessments and developing curricula to meet the developmental and cultural needs of clients. On a more encouraging note, many facilities were conducting discharge planning and providing aftercare, although the specifics of these services were not determined. © 2006 Elsevier Inc. All rights reserved.

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1. Introduction

Approximately 2.2 million adolescents (8.9% of the total adolescent population) suffered from alcohol and drug abuse in the United States in 2003 (Substance Abuse and Mental Health Services Administration [SAMHSA], 2004a). Approximately 156,000 adolescents were admitted into substance abuse treatment programs in 2003 (SAMHSA, 2004b). The years 1992 to 2002 witnessed an increase of 65% in the number of adolescent treatment admissions (SAMHSA, 2004b). Throughout the 1980s and 1990s, the number of adolescent specialty programs increased along with the number of adolescent admissions (Godley & White, 2005). According to the SAMHSA national treatment center directory, the number of self-identified adolescent specialty treatment programs increased from 2,874 to 4,291 (a 49% increase) between 1987 and

2003 (Godley & White, 2005). Still, in 2003, only about one third of substance abuse facilities had adolescent specialty programs.

Because of the numerous differences between adolescent and adult substance problems, it is critical that treatment programs be designed specifically for adolescents (Winters, 1999; Landry, 1996). For example, adolescents present for treatment most frequently owing to marijuana, which poses greater risks for dependence and abuse when first used during the adolescent years than later in life (Dennis, Babor, Roebuck, & Donaldson, 2002; Dennis, Titus, et al., 2002). Adolescents also have higher rates of binge and opportunistic use, lower problem recognition, and higher rates of comorbid psychiatric problems as compared with adults (Brown, Anderson, Ramo, & Tomlinson, 2005; Godley & White, 2005). They are likely to be more susceptible to different forms of influence such as peers in schools. Finally, adolescents are at a vulnerable stage of developmental change when they are first moving away from the family, developing identity formation, and highly focused on immediate concerns.

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Table 1
Nine key elements of effective adolescent substance abuse treatment programs

<i>Assessment and treatment matching</i>
Programs should conduct comprehensive assessments that cover psychiatric, psychological, and medical problems; learning disabilities; family functioning; and other aspects of an adolescent's life.
<i>Comprehensive and integrated treatment approach</i>
The adolescent's problems should be addressed comprehensively (medical, psychiatric, family, and environmental) rather than concentrating solely on curtailing substance abuse.
<i>Family involvement in treatment</i>
Engaging adolescents and their parents or caregivers and maintaining close links with the adolescents' family, home, school, and, where necessary, the juvenile justice system will ensure greater success in treatment.
<i>Developmentally appropriate program</i>
Because of the unique and rapid development that occurs during adolescence, it is important that substance abuse programs be specifically designed for adolescents rather than be merely modified adult programs.
<i>Engage and retain teens in treatment</i>
Treatment programs should build a climate of trust between the adolescent and the therapist.
<i>Qualified staff</i>
Staff should be trained in adolescent development, co-occurring mental disorders, substance abuse, and addiction.
<i>Gender and cultural competence</i>
Programs should address the distinct needs of adolescent boys and girls as well as cultural differences among minorities.
<i>Continuing care</i>
Programs should include relapse prevention training, aftercare plans, referrals to community resources, and follow-up.
<i>Treatment outcomes</i>
Rigorous evaluation is required to measure success, target resources, and improve treatment services.

To clarify those program features most essential to effective adolescent treatment, Drug Strategies, a research institute, convened a panel of expert researchers, policy-makers, and treatment practitioners specializing in adolescent substance abuse (Brannigan, Schackman, Falco, & Millman, 2004). These experts comprehensively reviewed existing literature and identified nine key elements that are critically important to the effectiveness of adolescent drug programs. (The elements are listed and described in Table 1). The expert panel also created operational definitions for evaluating these key elements, creating five components per element for use in measuring current programs.

In a survey of 144 significantly regarded adolescent treatment programs, Brannigan et al. (2004) observed that these programs employed a mean of 23.8 (median = 23) of the 45 components outlined by the expert panel. Of the nine key elements used to organize the 45 components, for only one element (qualified staff) did more than 50% of the highly regarded programs meet at least 4 of the element's 5 associated components. If even the most highly regarded programs fall short of the expert panel's standards, then assessing the key elements in all adolescent programs is a necessary first step to focus treatment on the essential

elements needed to deliver adolescents appropriate and effective care.

This study examined the extent to which substance abuse programs treating significant numbers of adolescent clients have components that are evidence of addressing the nine key elements of effective adolescent treatment programs. We used results from the National Survey of Substance Abuse Treatment Services (N-SSATS), the nation's largest and most systematic inventory of substance abuse treatment programs. Rather than analyze programs that report offering specific treatment programs for adolescents, we defined our study sample based on the number of adolescents reported receiving treatment on the last day of March 2003. Programs treating at least 10 adolescents on that single day were considered to have significant adolescent treatment programs. Because the N-SSATS and its predecessor surveys existed for years prior to the development of the expert panel's key elements and components, the N-SSATS results are not able to measure every aspect of program design identified as critical to effective treatment. We hope, however, that these analyses will provide a starting point for assessing adolescent treatment quality and point to first steps for improving substance abuse treatment for the American youth.

2. Materials and methods

2.1. Data source

The N-SSATS collects data on the location, characteristics, and utilization of all alcohol and drug treatment facilities, both public and private, in the United States. The N-SSATS is planned, directed, and funded by the Office of Applied Studies (OAS) of the SAMHSA, which is within the U.S. Department of Health and Human Services. For this study, we used the 2003 N-SSATS, which asked 37 questions of 15,124 active facilities from March 2003 through October 2003.

The unit of analysis for the N-SSATS is the facility, which is defined as "a physical location where treatment services are provided" (SAMHSA, 2003). Multisite treatment entities are instructed to respond separately for each physical location, although state variations in the way that treatment services are organized and licensed may limit the practical consistency of this definition. Survey completion is voluntary and carries no penalty for missing or incomplete data, but those submitting data are included in a treatment referral database kept on the SAMHSA's web site. The survey is administered by mail or using a web site-based form, with telephone follow-up to increase completion rates.

Of the 15,124 facilities that received the survey, 14,503 (95.9%) responded. The OAS excluded 398 of those responses and combined 482 responses with others from the same physical location, resulting in a final sample of 13,623. Facilities reported their census of patients receiving treatment on the reference date of March 31, 2003.

Table 2
The N-SSAT measures of the nine key elements of effective adolescent substance abuse treatment programs

Assessment and treatment matching	Comprehensive substance abuse assessment or diagnosis Comprehensive mental health assessment or diagnosis HIV testing Screening for hepatitis B Screening for hepatitis C STD testing TB screening
Comprehensive and integrated treatment approach	Accepts co-occurring mental health and substance abuse disorders Specific program for co-occurring mental health and substance abuse disorders Accepts pregnant/postpartum women Specific program for pregnant/postpartum women Accepts persons with HIV/AIDS Specific program for persons with HIV/AIDS Accepts criminal justice clients Specific program for criminal justice clients
Family involvement in treatment	Family counseling
Developmentally appropriate program	Specific program for adolescents
Engage and retain teens in treatment	No items
Qualified staff	No items
Gender and cultural competence	Services in language other than English Specific program for women Specific program for men Accepts gays and lesbians Specific program for gays and lesbians
Continuing care	Discharge planning Aftercare counseling Assistance with obtaining social services Assistance in locating housing Employment counseling or training Relapse prevention groups Outcome follow-up after discharge
Treatment outcomes	No items

For our analyses, we divided facilities into two groups based on their reported census of adolescent clients on the reference date of March 31, 2003. No or low adolescent volume facilities were defined as those with fewer than 10 adolescents receiving treatment services on the reference date. Significant adolescent volume facilities were defined as those with 10 or more adolescents in treatment on the reference date. Our assignment of facilities to the no or low volume and significant volume categories refers only to the number of adolescents served and does not account for the number of adults receiving treatment on the reference date; a no or low adolescent volume facility may actually have a high patient volume by serving large numbers of adults. We chose the absolute number cutoff of 10 adolescents enrolled

on a single date as opposed to a percentage-based or another absolute threshold in the belief that having 10 or more adolescent clients would significantly increase the chances that a facility had developed treatment services tailored toward adolescent clients. In this article, we present results from 2,499 significant adolescent volume facilities derived from a national census that reported 10 or more adolescents receiving treatment from their facility. These represent 18.3% of all facilities in the national census and 90% of all adolescents counted during the 1-day census. Of the remaining facilities, 10,040 (73.7%) were no or low volume facilities and 1,084 (8.0%) did not report the number of adolescents receiving treatment.

2.2. Measures

In the study of Brannigan et al. (2004), each of the nine key elements of effective adolescent treatment programs included five specific components as its operational definition. In this study, the N-SSATS, which does not include the same questions as those used by Brannigan et al., was used. The questions that were used to measure the nine components of effective adolescent treatment programs are shown in Table 2. It should be noted that the N-SSATS questions were asked of the whole facility and were not specific to the adolescent program.

3. Results

3.1. Assessment and treatment matching

Fig. 1 summarizes the percentages of significant adolescent volume treatment facilities providing the components of assessment and treatment matching measured in seven items from the N-SSATS. Almost all these facilities ($n = 2,414$; 96.6%) conducted comprehensive substance abuse assessment. However, only 1,250 facilities (50%) conducted comprehensive mental health assessments.

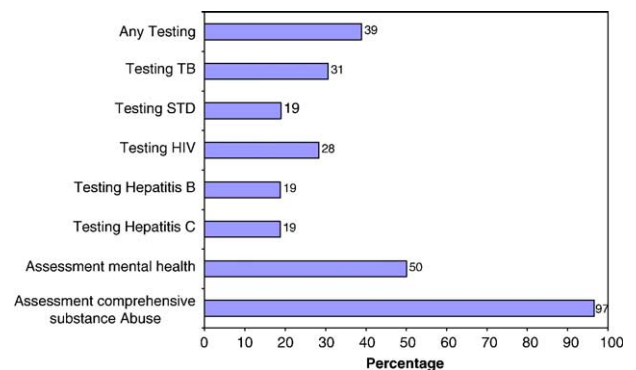


Fig. 1. Percentages of significant adolescent volume treatment facilities reporting component services of assessment and treatment matching on the N-SSATS.

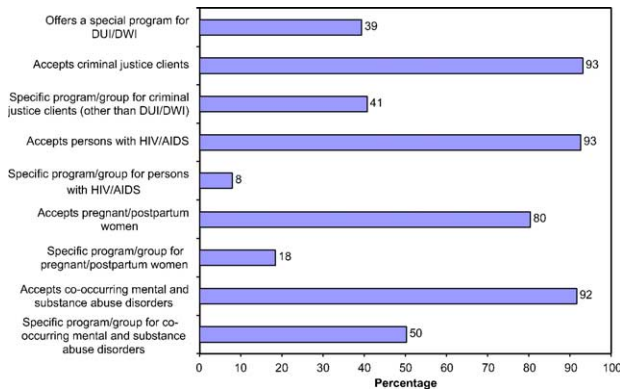


Fig. 2. Percentages of significant adolescent volume treatment facilities reporting component services of a comprehensive and integrated treatment approach on the N-SSATS.

Testing for medical issues was relatively limited, with 973 facilities (38.9%) reporting any screening for medical conditions. The percentage of facilities screening for individual health issues included 18.8% for hepatitis B, 18.7% for hepatitis C, 28.3% for HIV, 18.9% for sexually transmitted diseases, and 30.6% for TB.

3.2. Comprehensive and integrated treatment approach

We were only able to capture some of the items that the original Brannigan et al. (2004) study used to define “comprehensive and integrated.” Specifically, the Brannigan et al. study looked into the following features as indicative of comprehensive and integrated treatment: (1) provide mental health services onsite or with community mental health providers; (2) provide medical services either onsite or by referral; (3) provide sexual health services either onsite or by referral; (4) maintain communication with home or the school system regarding academic issues; and (5) maintain contact with juvenile justice officials.

Fig. 2 summarizes the percentages of significant adolescent volume treatment facilities providing the components of a comprehensive and integrated treatment approach measurable through nine items from the N-SSATS. Overall, the programs scored much higher on all items about inclusiveness in those admitted than they did in response to questions of specialized program components. Specifically, 2,290 (91.6%) programs accepted clients with dual diagnoses, 2,009 (80.4%) did pregnant or postpartum women, 2,315 (92.6%) did clients with HIV/AIDS, and 2,327 (93.1%) did criminal justice clients.

However, fewer programs offered the types of tailored treatment programs for specialized needs that could demonstrate a comprehensive and integrated treatment for such clients. Only 1,255 (50.2%) facilities offered special programs for clients with dual diagnoses who have both mental and substance use disorders. Fewer ($n = 460$; 18.4%) facilities offered special programs for pregnant or postpartum women, and 198 (7.9%) offered programs designed

for clients with HIV/AIDS. Finally, 984 (39.4%) facilities offered special programs for criminal justice clients.

3.3. Family involvement, developmental appropriateness, and engagement

In this section, we present the N-SSATS items that matched with components of family involvement in treatment, a developmentally appropriate program, and engaging and retaining teens in treatment. Among the facilities of interest, 2,263 (90.6%) offered family counseling. That said, it bears pointing out that the original Brannigan et al. (2004) study identified five measures of this element of family involvement in treatment; however, the N-SSATS only has data on this one measure.

By definition, all significant adolescent volume treatment facilities accepted adolescents. However, only 2,167 of those (86.7%) had a specially designed substance treatment program or group for only youth. A special program for adolescents would be the minimum threshold necessary to ensure that treatment services were developmentally appropriate for adolescents.

3.4. Gender and cultural competence

Fig. 3 summarizes the percentages of significant adolescent volume treatment facilities providing the components of gender and cultural competence measurable through seven items from the N-SSATS. As with the items used to evaluate the comprehensiveness of facilities’ treatment approaches, N-SSATS respondents showed large gaps between the number of facilities accepting clients with specific cultural needs and the number of those with treatment programs specialized for those needs. Among treatment providers, 2,070 (82.8%) accepted women, 2,070 (82.8%) accepted men, and 2,369 (94.8%) accepted gays and lesbians. However, only 1,153 (46.1%) facilities offered specialized programs for women, 839 (33.6%) did for men, and 156 (6.2%) did for gays and lesbians. Finally, only



Fig. 3. Percentages of significant adolescent volume treatment facilities reporting component services of gender and cultural competence on the N-SSATS.

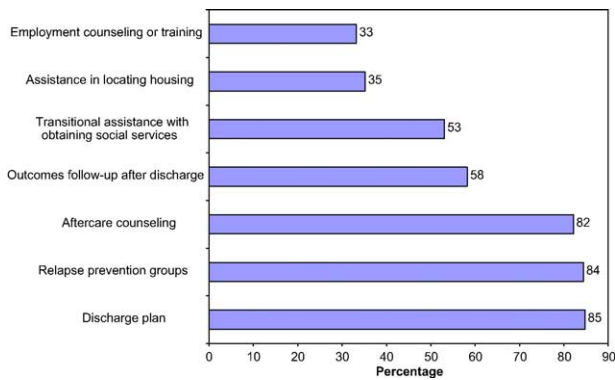


Fig. 4. Percentages of significant adolescent volume treatment facilities reporting component services of continuing care or treatment outcomes on the N-SSATS.

1,232 (49.3%) of the facilities offered services in languages other than English. Again, it should be noted that these results were true for the whole facility and not just the services offered to adolescents.

3.5. Continuing care and treatment outcomes

Fig. 4 summarizes the percentages of facilities providing the components of continuing care and treatment outcomes measurable through the N-SSATS based on a total of seven items. Among the facilities, 2,118 (84.8%) offered discharge planning, 2,053 (82.2%) offered aftercare counseling, and 2,109 (84.4%) offered relapse prevention groups. However, fewer facilities ($n = 1,455$; 58.2%) offered outcomes follow-up after discharge. Even fewer facilities (53.1%) reported offering assistance in obtaining social services (e.g., Medicaid, WIC, SSI, SSDI), assistance in locating housing (35.2%), or employment counseling or training (33.2%).

4. Discussion

From this preliminary analysis cross-walking from N-SSATS data to key elements for quality adolescent substance abuse treatment facilities, significant adolescent volume substance abuse programs have room for improvement to meet quality standards established by the expert panel convened by Drug Strategies. The most significant measured gaps occurred in the areas of including mental health as well as medical issues in comprehensive assessments and developing curricula to meet the developmental and cultural needs of clients with special needs. More positive findings were evidenced in the areas of discharge planning and aftercare. The findings suggest priority areas for improving adolescent substance abuse treatment and identify potential N-SSATS modifications that could improve monitoring of treatment program quality.

One might argue that the cut point that we used to define significant adolescent volume facilities was either too high

or too low. Examining the distribution of facilities that had adolescent patients on the day of the census, we found that fewer than 20% of the facilities had 10 or more adolescent patients and that they made up 90% of the adolescents counted on the day of the census. We also examined the distribution of the facilities' characteristics using different cut points. Fifty percent or more of adolescents were treated in facilities that had an adolescent census of 40 or more adolescents. The distribution of the recommended characteristics was very similar among these facilities as compared with that observed among the facilities with a daily census of 10 or more adolescents. This implies that the results would not be greatly influenced by using a different definition of significant adolescent volume facilities.

It might also be argued that our definition of significant adolescent volume facilities included many programs that do not cater to substance abuse treatment for adolescents. However, of the facilities we labeled as having significant adolescent volume, 87% reported that they offered a specific substance abuse program for adolescents. In addition, there are some components of care here measured for the presumed adolescent programs that should also be evident in programs for adults, especially those related to cultural diversity, comprehensive and integrated treatment, and continuing care.

A special survey of a sample of the N-SSATS facilities offering substance abuse treatment to adolescents would be necessary to further assess what elements were specific to adolescents and to measure more specifically the components identified by the expert panel.

Of the components reflecting the key elements of quality adolescent substance abuse treatment that we were able to measure with the N-SSATS results, three particular themes emerged. First, although programs provide comprehensive assessments of the substance abuse needs of their clients well, they rarely attend to the mental or other medical needs that frequently co-occur with adolescent substance abuse and influence its course of treatment. The N-SSATS results show that almost all facilities treating adolescents are conducting substance abuse assessments. However, far fewer facilities are conducting mental health assessments and fewer still are testing for infectious diseases common among illicit substance users. Accurate assessment of comorbid mental disorders is essential in the development of effective interventions for adolescents with substance disorders (Winters & Fahnhorst, 2005). Medical assessment of adolescent clients is also essential, largely because co-occurring medical conditions are more common among treated than among untreated substance abusers (Adrian & Barry, 2003; Wu, Hoven, & Fuller, 2003). Ideally, assessments should be conducted using standardized assessment instruments. The N-SSATS did not query about the nature of assessments; however, Brannigan et al. (2004) found that only 10% of high-quality substance abuse facilities reported using both a standardized substance abuse instrument and a mental health instrument.

Second, programs appear eager to accept the widest possible range of clients, but they may not be designing treatment curricula sensitive to their clients' diverse needs. Brown et al. (2005) reviewed the numerous developmental and clinical needs that most influence treatment engagement and outcomes. For example, research suggest that adolescents will remain more engaged in treatment if the positive benefits of sobriety are tied to their concerns about peer group relations and identity formation. Furthermore, the process of identity formation, and its significant relationship with sex and gender roles, creates an increased need for programs that are sensitive to those issues. For example, male and female adolescents may not feel comfortable revealing personal information to therapists or group participants of the opposite sex, whether or not that information is related to sexual or gender-formation issues. Finally, in light of the fact that more than half of adolescents in substance abuse treatment programs concomitantly suffer from mental disorders (Rhode, Lewinsohn, & Seely, 1996; Clark & Bukstein, 1998), the incorporation of mental disorder treatment into substance abuse treatment by only 50% of facilities is also particularly worrisome.

Finally, the relatively high rate with which facilities provided discharge planning and aftercare is encouraging. Continuing care must be improved to ensure the best possible outcomes for treatment. Clinical and correlational observations suggest that posttreatment monitoring and recovery support services can enhance the stability and durability of recovery (Donovan, 1988). More detailed studies need to be conducted to understand more of the nature of the aftercare being provided.

The current N-SSATS does not map well to several factors of the expert panel's key elements of successful adolescent treatment. We were able to map few of the components of family involvement in treatment to N-SSATS items. We also found that there were no N-SSATS items on the qualifications of facility staff, few items to measure the evaluation of treatment outcomes, and few N-SSATS items that measured components of developmentally appropriate treatment programs and engaging adolescents in treatment. Although information on these factors could have added richness to this analysis, the addition of such questions would add substantial respondent burden that could diminish the response rate. As the SAMHSA and the states move forward with the implementation of the National Outcomes Measures, additional data that can be used to address questions of the quality of adolescent substance abuse treatment will become available.

This study must be understood in light of its limitations. First, the information on the characteristics of services offered by substance abuse facilities were based on self-report by the facility and may be subject to reporting error. The survey was a questionnaire and limited data about the nature and extent of the services were captured.

This study and those preceding it raise the question of how high-quality substance use disorder services for

adolescents can be further promoted. In part, the issue could be addressed through licensing and certification requirements. A recent review of state-level certification and program requirements for public inpatient youth facilities found limited or no regulations focused on youth in most states (Polio et al., 2004). Another barrier to high-quality services for adolescents may be the struggle for financial viability by these programs. Private insurance funding to all substance abuse providers has been flat or declining (Mark & Coffey, 2004). Although public sources have been growing (Mark et al., 2005), the growth has not kept pace with the growth in health services overall. Finally, additional research is needed to demonstrate that there is an evidence base demonstrating that the key adolescent treatment program elements are critical for effective adolescent treatment, and those results must be disseminated to substance abuse facilities and professionals.

Substance use disorders that occur in adolescents can continue into adulthood and have a profound effect on adolescents' future growth and development. Tackling these problems early and effectively is essential. Overall, even facilities that are taking on this challenge have room for improvement in terms of implementing family-inclusive, comprehensive, targeted, and tailored programs.

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