Residential Treatment of Adolescents with Substance Use Disorders: Evidence-Based Approaches and Best Practice Recommendations

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Introduction

The rate of alcohol and drug abuse among adolescents and the number of youth at risk for the development of substance use disorders later in life remain a serious, national health concern. Intervention and prevention in adolescence is particularly, indicated considering that most long-term patterns of abuse and dependence originate in youth or young adulthood. Although most of the early efforts to address adolescent substance abuse utilized adult treatment models, more recent efforts have been based on research with adolescent populations and are informed by theories and knowledge of adolescent development. Recently, the National Institute of Drug Abuse (2014) put forth recommendations for adolescent substance abuse

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treatment in a research-based guide that highlighted best practice principles. Residential care of adolescents with substance abuse disorders represents one level of care in the continuum of treatment approaches. A residential treatment center has been defined as a 24-h facility designed for the treatment of mental health disorders (including substance abuse) that is not licensed or designated as a hospital (Connor, Miller, Cunningham, & Melloni, 2002). Leichtman (2006) and, others note that there is no consensus on the defining characteristics of residential treatment and that there is tremendous heterogeneity among programs. This makes the measurement of effectiveness extremely difficult. Although many programs have incorporated group, family and individual therapies, the essence of residential treatment has often resided in the concept of the "milieu," an elusive concept that is not well articulated. One often cited core aspect of the therapeutic milieu is that the most powerful therapeutic intervention is the moment-to-moment, and day-to-day interactions between direct care staff and program participants. The purpose and intent of those interactions and the methods used to structure them are at the core of residential care.

Residential substance abuse treatment for adolescents has continued to lack adequate research regarding its practices and outcomes. However, it should be noted that separately there are best practices, principles and strategies in both residential treatment and in adolescent substance abuse treatment. In this chapter both are summarized for the best possible care.

Residential Treatment

It should be understood that residential treatment is a highly complex treatment intervention that encompasses all of the rules, therapies, staff interactions, structures, philosophies, etc. involved in 24-h care, 7 days a week, typically lasting 6 months or longer. Beyond this general and overarching definition of residential, there are no specific models of adolescent substance abuse residential treatment have been sufficiently articulated and/or investigated. Programs are characterized by a high degree of variability and heterogeneity. There has been controversy regarding whether or not residential treatment is effective, in general, or in the treatment of adolescent substance abuse, in particular.

The use of residential treatment for adolescents with behavioral, psychiatric, and substance use disorders had been growing steadily since the early 1900s, and according to Leichtman had "assumed a prominent place among mental health services for children" (Leichtman, 2006, p. 285). Connor et al. (2002) reported that the number of youth receiving this form of treatment grew steadily between 1982 (29,000 youth) and 1997 (117,720 youth). However, "by the 1990s, residential treatment had lost much of its luster" (Leichtman, 2006, p. 286).

In response to system of care and other community mental health movements, residential care underwent significant scrutiny and was found lacking due to the practice of separating children from their parents, little to no involvement of family in treatment, poor aftercare planning, and a general failure to maintain treatment gains in the community post discharge. In a special issue of the *American Journal*

of Orthopsychiatry, Pumariega (2006a) concluded that there is limited evidence for the effectiveness of residential treatment.

A major review of evidence-based treatments (Hoagwood, Burns, Kiser, Ringeisen, & Schoenwald, 2001) concluded that residential treatment for children and adolescents is a widely used but empirically unjustified service, and that any gains made during treatment are seldom maintained once the adolescent returns to the community. A further concern regarding residential treatment is the potential iatrogenic effects of placing youth with substance abuse problems in settings that may be dominated by a deviant peer culture where drug use is glorified and antisocial behavior encouraged. This issue is a particular concern in the case of placing "light" users in the same program with "heavier" users. In light of these challenges, the clinical management and composition of the group experiences that form the core of the milieu take on added importance (Kaminer, Blitz, Burleson, Kadden, & Rounsaville, 1998).

On the other side of the debate regarding the effectiveness of residential care, Lyons and McCulloch (2006, p. 251) warn that "it is important that residential treatment not be dismissed as an ineffective intervention because of the barriers that its complexity poses for conducting randomized clinical trials." In a position statement on residential care, the Child Welfare League of America (Child Welfare League of America (CWLA), 2005) maintains that residential treatment is an important component in the continuum of care and cites several studies of effectiveness while acknowledging the limitation of much of the research in the field.

In response to the issues identified in research specific to outcomes for youth in residential treatment centers there are now best practice solutions that engage youth, families, providers, and communities in a collaborative process that improves treatment outcomes for youth. One of these best practice solutions is the Building Bridges Initiative (BBI). BBI was created as a way to better engage residential interventions and their community counterparts, along with youth and families, and has created tip sheets, monographs, and other materials and resources to help improve practices. More information about BBI can be found at: www.buildingbridges4youth.org.

BBI's strategies incorporate and address (a) the negative concerns found in the research, such as high recidivism, use of seclusion and restraint, and long lengths of stay; (b) the positive practices known to improve outcomes for youth in residential treatment which include shorter lengths of stay, increased family and community involvement, and stability and support in the post residential environment, and (c) the administrative, fiscal, treatment, and policy realities of residential treatment providers who implement BBI in the community (Walter & Petr, 2008).

The key BBI strategies are as follows:

1. Establish relationships and dialogue across all constituent groups, including families, youth, community-based and residentially based treatment and service providers, advocates, and policy makers.
2. Identify and promote best practices and innovative solutions.
3. Identify and propose recommendations to overcome fiscal, licensing, regulatory, and practice barriers.
4. Identify needed technical assistance, training, and support for providers, policy makers, families, and youth.

5. Identify or develop measures that provide information and feedback about system efforts to coordinate and integrate services and supports, and to implement the values and principles described in the Building Bridges Joint Resolution.
6. Develop and implement dissemination and marketing strategies to communicate the critical importance of creating a coordinated and comprehensive array of community-based and residential treatment services and supports that are family-driven, youth-guided, strength-based, culturally and linguistically competent, and focused on sustained positive outcomes.

Another best practice solution is the Six Core Strategies for Reducing Seclusion and Restraint Use. Disseminated by the National Association of State Mental Health Program Directors (NASMHPD), these strategies were developed through extensive literature reviews and input from experts who have successfully reduced the use of S/R in a variety of mental health settings for children and adults across the USA and internationally (NASMHPD, 2008). In addition to developing strategies, NASMHPD also provides a planning guide and tool, and examples of policies to support the cultural change necessary throughout the facility. The strategies are:

1. Consistent, Continuous and Engaged Leadership to Guide Organizational Change
2. Use Data to Inform Practice Throughout the Facility
3. Create a Treatment Environment through Workforce Development
4. Reducing the Use of Seclusion and Restraint Prevention Tools
5. Inclusion of Consumer Roles in Inpatient Settings
6. Debriefing Techniques for every Seclusion Restraint Event

Recently, there has been pressure on the residential field to provide data on outcomes associated care. Assembled in 2014, the BBI Outcomes Workgroup, was brought together to develop and implement guidelines and practices to promote self-assessment among residential treatment and service providers. In 2015, the Outcomes Workgroup, together with Chapin Hall and other national partners, articulated that long-term outcomes for young people should be researched across four functional domains: Home, Purpose, Community, and Health. These domains provide a framework for measuring long-term well-being, and a benchmark to achieve comprehensive, coordinated care for youth and families. Further, the Outcomes Workgroup, conducted a feasibility pilot aimed to test methods for collecting functional outcomes data among youth 6 months post discharge from residential care; to identify barriers to data collection; and to test the feasibility of provider-based data management, case identification, and data collection. The results are in press but the major take away is that collecting outcome data is feasible post discharge. This data is needed to understand the long term impact of residential care (Blau, Caldwell, & Lieberman, 2014).

Finally, the accreditation processes for residential facilities for youth provide standards of care with which a facility must be compliant in order to attain and sustain accreditation. The Joint Commission on Accreditation of Hospital Facilities (JCAHO: https://www.jointcommission.org/) and the Commission on Accreditation of Rehabilitation Facilities (CARF: https://www.carf.org) both have standards for residential facilities that serve the adolescent population, as well as other healthcare

facilities. As the funders and payors of adolescent and substance abuse services require accreditation for licensing, those standards support and even require the utilization of BBI and 6-core strategies or other improvement processes for care and treatment outcomes for our youth and their families.

Substance Abuse

In general, most adolescents receiving residential substance abuse treatment (RSAT) show reduction in use and associated problems in the year following treatment (Williams & Chang, 2000). According to Sealock, Gottfredson, and Gallagher (1997), substance abusing youthful offenders randomly assigned to residential vs outpatient treatment reported decreased drug use and delinquent behavior and exhibited a longer time till rearrest. Leichtman, Leichtman, Barber, and Neese (2001), reported that intensive, short-term residential treatment can be an effective treatment intervention with adolescents when it includes family therapy, connection to community activities, and effective discharge planning. A meta-analysis of adjudicated, adolescents in residential treatment reviewed 111 studies (Garrett, 1985) and reported that recidivism was modestly improved as were adjustments in the institution, academic performance, and psychological adjustment. The authors concluded that residential treatment does "work." Frensch and Cameron (2002) conducted a review of studies of adolescent residential treatment centers. They determined that despite the lack of a uniform treatment approach and numerous methodological limitations, some youth appear to show improvement in functioning, although that improvement tends to dissipate post discharge. Hooper and colleagues (Hooper, Murphy, Devaney, & Hultman, 2000) reported that 60% of youth receiving residential care demonstrated successful outcomes and that long-term treatments that incorporated home and school components were most successful. In a review of 18 outcomes studies conducted, between 1993 and 2000, Hair (2005) concluded that residential treatment is beneficial in both the short-term and the long-term. Finally, researchers in Washington State evaluated the economic costs and benefits of adolescent RSAT (French, Salome, & Carney, 2002) and found that the benefits outweighed the costs by a factor of 4.34 to 1 for a net cost-savings of $16,418 per treatment episode.

Taking into account the preceding review, a reasonable adolescent, parent, provider, or policy maker might conclude that some but not all adolescents are likely to show, some level of improvement following a period of residential treatment. However, to justify the costs, removal from the community, and disruption of family life associated with residential care, the need for evidence that residential care is superior to other forms of less intrusive treatment, even if only for a specific subpopulation of adolescents that use drugs and alcohol. The American Academy of Child and Adolescent Psychiatry (2005) practice parameter on adolescent substance abuse treatment recommends that treatment should always occur in the least restrictive environment and residential treatment should be recommended only when previous treatment efforts have failed, when there is a need for additional structure and

supervision that cannot be provided in a less restrictive setting, or when there are specific goals of treatment that cannot be accomplished in community-based settings.

Given the paucity of randomized clinical trials of well-defined and adequately articulated residential models for the treatment of adolescents with drug and alcohol problems, this chapter focuses on the features of successful residential programs and the integration of evidence-based treatment approaches into the residential milieu.

Prevalence, Need for Treatment, and Population Parameters

The Prevalence of Alcohol Use

Alcohol use among adolescents has declined. According to the Monitoring the Future national survey results, 1975–2016, all alcohol measures, including lifetime, annual, and binge drinking prevalence, were at a historic low for 8th, 10th, and 12th graders. Lifetime alcohol prevalence in teenagers has declined, with the rate of teens reporting they have "been drunk" in the past year at the survey's lowest rates ever. 37.3% of 12th graders reported they have been drunk at least once, down from a peak of 53.2% in 2001. In 2016, the proportions of 8th, 10th, and 12th graders who reported drinking an alcoholic beverage in the 30-day period prior to the survey were 7%, 20%, and 33%, respectively (Johnston, O'Malley, Miech, Bachman, & Schulenberg, 2017).

Alcohol use steadily rises until age 30, with use higher in young adults compared to high school age, and age 30 being the peak at 76%, compared to 33% among 18 year olds. These increases are interpreted to be due to age-related life events such as leaving the parental home and attending college. Binge drinking follows a similar trend, with an occurrence in the past two weeks of 16% at age 18, 23% between ages 19 and 20, and reaching a peak at ages 21–22 at 38%, then slowly decreasing with age (Schulenberg et al., 2017).

The Prevalence of Marijuana Use

Like alcohol, there has also been no increase in marijuana use among adolescents. In fact, marijuana use has remained stable since 2011. Among 12th graders, use increased from 2006 to 2011 and then has held level through 2016. Daily use has increased in 8th, 10th, and 12th grades after 2007, reaching peaks in 2011. Daily prevalence rates in 2016 were 0.7% for 8th graders, 2.5% for 10th graders, and 6.0% for 12th graders, respectively, with one in seventeen 12th graders smoking daily.

Recent research indicates that marijuana use among adolescents may be related to the laws permitting use by state. According to Monitoring the Future national survey results, 1975–2016, there is a higher rate of marijuana use among 12th

graders in states with medical marijuana laws, compared to states without them. For example, in 2016, 38.3% of high school seniors in states with medical marijuana laws reported past year marijuana use, compared to 33.3% in nonmedical marijuana states (Johnston et al., 2017).

Over the past 5 years, states have legalized marijuana for medicinal use, recreational use, or decriminalized possession of the drug. States with recreational legalization of marijuana include—Nevada, Colorado, Washington, Oregon, Alaska, California, Maine and Massachusetts. States with medicinal legalization of marijuana include—Arkansas, Florida, North Dakota, Minnesota, Montana, Michigan, Ohio, Pennsylvania, New York, Illinois, Arizona, New Mexico, Hawaii, New Jersey, Delaware, Maryland, District of Columbia, Vermont, Connecticut, and New Hampshire (Governing the States and Localities, 2017). At the federal level marijuana is still considered an illicit substance and is classified as *Schedule I* under the Controlled Substance Act.

Perceived risk associated with use has continued a steep decline since the mid-2000s without a concomitant further rise in overall use. Disapproval and availability may be constraining factors offsetting the effects of risk. Recent, sharp declines in the use of "gateway drugs"—in particular cigarette smoking, with which marijuana use has been highly correlated— may also be playing a role. In terms of access to marijuana, 81% of 12th graders state they can get marijuana easily if they wanted to (Johnston et al., 2017).

Although marijuana laws pertaining to this drug are changing, as with any mind altering substance, marijuana use should be taken into account and targeted adolescents entering treatment.

In general, adolescent use of illicit drugs has gradually declined over the past 20 years. There have been some slight increases in use of substances in different adolescent age groups at random between 2007 and 2011, including use of amphetamines, MDMA, and narcotics other than heroin. However, rates of use have continued to slowly decline in a broad spectrum of substances in general since the 1990s (Miech et al., 2017).

Need for Treatment

According to the 2015 Behavioral Health Barometer, 5.1% of adolescents needed substance use treatment in 2014, yet only 6.3% received treatment; or 80,000 out of 1.3 million adolescents. Between 2005 and 2015, marijuana and alcohol represented the most common drugs targeted for treatment in adolescent substance abuse programs accounting for 83% and 87% of all adolescent substance abuse treatment episodes, including outpatient, partial hospitalization, and residential treatment types (SAMHSA, 2015a).

An increase in treatment admissions for opioids was recorded over this time span as well, with opioid use representing 2% of admissions between 2005 and 2008 but increasing to 3–4% of admissions between 2009 and 2015. For those adolescents

reporting treatment in the past year, 10–12% reported that they received treatment in a residential facility, 1–2% received treatment in an inpatient hospital facility, and 87–89% received treatment in an outpatient setting. The 2015 National Survey of Substance Abuse Treatment Facilities found that in 2015, there were 729,771 clients under the age of 18 in substance abuse treatment, making up 6–8% of the substance abuse treatment population. 75% of those under 18 were in specialty programs designed just for adolescents, a 26% decrease from 2005 (SAMHSA, 2015b). The age of first use is an important factor in adolescent admissions. The average age of first use of lower level substances, such as alcohol, is 13.2 years, and 15.2 years for higher level substances, such as cocaine (Bracken, Rodolico, & Hill, 2013).

Another cause for concern is the heroin specific deaths which have tripled between 2010 and 2015 (12,989 heroin related deaths in 2015) (Rudd, Seth, David, & Scholl, 2016). The largest increase in overdose deaths in that same year was for those involving synthetic opioids (other than methadone)—5544 deaths in 2014 to 9580 deaths in 2015. Fentanyl (an illegal synthetic opioid) drove this increase. According to findings by CDC, from 2002–2013, use of heroin (both in terms of the past month and past year), as well as dependence defined by the DSM-IV criteria, all increased among young adults ages 18–25.

In light of this, the US Department of Health and Human Services is spearheading an interagency collaboration to maximize the effect of programs related to the Comprehensive Addiction and Recovery Act (CARA) and twenty-first Century Cures Act (Cures Act). Additionally, the President's Commission on Combating Drug Addiction and the Opioid Crisis was created to provide guidance to the nation for an emergency response plan starting in December of 2016.

Population Parameters

Co-occurrence of substance use problems and psychiatric disorders occurs in adolescents more often than not. Common co-occurring disorders in adolescents with a substance use disorder include conduct disorder, ADHD, trauma-related disorders, and mood disorders. Recent findings show that 29% of adolescent males and 49% of adolescent females had both a mood disorder and substance use disorder. Co-occurring disorders are also associated with more severe substance use disorder symptoms and less treatment success (Hulvershorn, Quinn, & Scott, 2015). Subramanian, Stitzer, Clemmey, Kolodner, and Fishman (2007) found that over 50% of adolescents in RSAT had clinically elevated scores on the Beck Depression Inventory and the presence of depression at intake was associated with increased post discharge substance use. The data also shows that depression, victimization, and other mental health conditions are related to an earlier age of initiation and increased consequences of use at an early age. Adolescents with a major depressive episode in the past year were twice as likely to use alcohol and other drugs. Early intervention with depressed adolescents may reduce the onset of substance abuse.

Another study by Chan, Dennis, and Funk (2008) showed that two thirds of adolescents and young adults had a co-occurring mental health problem in the year prior to treatment admission for substance use. Further, adolescents' and young adults' self-reporting criteria for past-year substance use disorder were more likely than those who did not report to have other co-occurring mental health problems. Young adults (ages 18–25) were found to be most vulnerable to co-occurring problems. Considering the high prevalence and cost (e.g., increased risk of serious medical and legal problems, incarceration, suicide, school difficulties and dropout, unemployment, and poor interpersonal relationships) of untreated co-occurring disorders, RSAT must consider targeting both issues for intervention (Hawkins, 2009), especially as problems may worsen into young adulthood.

Youth with lower SES were also more likely to have a comorbid disorder. Although high rates of dual diagnosis among adolescents with substance abuse problems are well documented, most children are placed in residential settings without consideration given to matching the adolescent's individual treatment needs with the particular expertise and service package of the treatment program (Weiner, Abraham, & Lyons, 2001). Boys and girls with dual diagnoses were more likely to have problems with suicidality, development, and delinquency. Those who have co-occurring mental health and psychiatric disturbance, early onset delinquency and conduct disorder or a history of abuse have poorer outcomes. It has been noted that the most vulnerable children who are most often referred to residential care may be the least suited to benefit from it (Connor et al., 2002).

Commenting on the rate and variability of relapse, Tomlinson,

Brown, and Abrantes (Tomlinson, Brown, & Abrantes, 2004, p. 168) noted that "heterogeneity within substance abusing samples including co-morbid psychopathology may account for a portion of the variability in relapse rates." Those adolescents with comorbid psychiatric conditions returned to substance use more quickly and at a higher rate following discharge from short-term RSAT. In addition to comorbid psychiatric conditions, youth receiving treatment in residential substance abuse programs are very likely to have experienced trauma in their lives and to demonstrate symptomatic responses to traumatic exposure. In one study, 71% of residential program participants reported lifetime exposure to trauma, and 29% met criteria for PTSD. Trauma-exposed adolescents reported more behavioral problems and were more likely to leave treatment sooner (Jaycox, Ebener, Damesek, & Becker, 2004).

Gender differences in overall substance use are present within the adolescent population, with males having somewhat higher rates in overall illicit drug use. However, specific drugs of choice show varying differences, with females having higher misuse rates of prescription drugs such as amphetamines, tranquilizers, and sedatives. Race and ethnicity differences are also present within this population. Hispanic adolescents currently have the highest rates of substance use in the past few years, mainly due to their increase in use of marijuana. Yet, they also have higher reported use rates in almost every class of drug, except for prescription drugs, in which White adolescents have the highest rates of misuse. African-American adolescents have usually had lower rates of overall illicit drug use than Hispanic and

White adolescents, but the gap is narrowing more with recent increases in marijuana over the past couple of years (Johnston et al., 2017).

While ethnic disparities in healthcare methods and outcomes are common in general medical practice as well as specialty treatments, the findings here are similarly troubling and suggest that criteria regarding what constitutes "least restrictive care" may be unevenly applied. In an investigation of the role of client factors in treatment retention, Edelen et al. (2007) reported that positive self-attitude, problem recognition, and having a strong social network predicted retention in care for 90 days or more. Remaining in care for 90 days or more is a known predictor of better outcome post discharge.

Youth who do better in residential care also include those with better overall functioning and academic ability, lower rates of conduct problems, and the involvement of a child's family in treatment (Connor et al., 2002). Other client factors often related to successful outcome include completing treatment, low pretreatment use of substances, peer and parent social support, and nonuse of substances by the youth's familial and social network (Williams & Chang, 2000). Researchers have found that laboratory measures of distress tolerance (e.g., cold pressor tests and stressful cognitive challenges as measures of an individual's general ability to tolerate distress) can predict early dropout from adolescent residential treatment (Daughters et al., 2005). The study authors suggest that efforts be taken to improve distress tolerance of children and youth in residential care given the significance of dropout in this level of care.

Theoretical Background and Principal Interventions

Recent research has highlighted trends and successes in adolescent substance abuse treatment across settings. Trends in clinical approaches include identifying the youth's strengths and building upon them, teaching skills to resist triggers specific to the individual and their drug use pattern, and address contributing factors to the onset or continuation of drug use, such as mental illness, trauma, and negative family or peer relationships. Treatment centers also are usually using an eclectic intervention model, using traditionally single approaches in a combined manner. Treatment centers are treating adolescents in mostly outpatient settings, with the most progress using family-based approaches and motivational enhancement techniques. Overall, the results are positive with decreases being seen in adolescent substance use following treatment.

Despite these findings, studies have also highlighted areas of need and found that there is a multitude of short-comings in current interventions. This includes the lack of specialized, developmentally focused treatment options as well as inconsistency in the overall quality of treatment and too short of durations of treatment. These findings also come from the acknowledgement of the difference in needs of adults and adolescents in treatment. One of these areas of difference is in treatment need motivation; motivational enhancement techniques should be utilized on the front end of all treatment to increase treatment motivation and the belief that drug use is not a problem.

The majority of adolescent substance abuse treatment should and does occur in outpatient settings, but severe dependence should be addressed in longer, more intensive treatment settings such as residential. During or after treatment in these settings, lapses and relapses should be considered the norm and continuity of care should be utilized. Because of these factors, including things such as self-help programs, recovery high schools, alternative peer groups, and the adolescent community reinforcement approach (A-CRA) have proven beneficial (Winters, Tanner-Smith, Bresani, & Meyers, 2014).

In the minimal research that has been conducted in residential settings, there are a few primary approaches to residential treatment for adolescent substance use. They include the Minnesota Model (12, steps), Multidisciplinary Team Model, The Seven Challenges, and the Therapeutic Community (TC).

The Minnesota Model, also known as 12 Steps, is based on Alcoholics Anonymous (AA) and Narcotics Anonymous (NA). This model is widely used in adolescent substance use treatment and views addiction as a disease that is consistently treated throughout one's life with abstinence as the goal (Muck et al., 2001). The Minnesota Model includes elements of social support, relationship to a "higher power," motivation for change, and the importance of lifestyle. 12-Step approaches have been adapted for adolescents and have been shown to have some, effectiveness (Winters, Stinchfield, Opland, Weller, & Latimer, 2000). The limited availability of adolescent 12-step groups in community settings has been identified as a limitation of this approach, but adolescents participation in adult 12-step groups have been shown to lead to positive outcomes (Brown, Myers, Abrantes, & Kahler, 2008). The social networking opportunities afforded by, the Internet could be helpful in connecting youth with 12-step groups and like-minded peers interested in recovery. Application of the 12 steps is a common element of most adolescent residential treatment programs.

The Minnesota Model is an effective model of treatment resulting in decreased use of substances post treatment, particularly for those who completed treatment (Winters et al., 2000). Fishman, Clemmey, and Hoover (2003) describe the treatment approach of the Mountain Manor Treatment Center, an exemplary model of adolescent substance abuse treatment. They report positive results with an eclectic milieu therapy approach that incorporates elements of the 12 steps, as well as TC, motivational enhancement therapy (MET), and multisystemic approaches.

The Multidisciplinary Team Model includes a variety of professionals, often led by a physician, who provide a range of treatment modalities across several primary domains: substance use/abuse, education/vocation, social/leisure, medical, family, and legal. While this approach has been widely utilized in residential treatment programs and in many evidence-based treatments for substance abuse, the approach itself has not been well defined, is often combined with other approaches, and there is scant quality treatment outcome research supporting its effectiveness.

The Seven Challenges is a relatively new approach to treatment of adolescent, substance abuse that originated in the field and has received recent research, attention. The Seven Challenges incorporates knowledge of adolescent development (Schwebel, 2004). The program has been found to be effective in multiple, treatment settings (e.g., outpatient and residential or milieu-based settings) and, is

considered a promising practice (Dennis & Kaminer, 2006). The model is a relationship-based approach that incorporates aspects of motivational enhancement therapy, cognitive behavioral approaches, and health decision making focusing on the adolescent's particular need for autonomy, self-determination, and choice. Seven Challenges meets adolescents at the stage of treatment they are at, even if it is a stage of complete denial. The model then goes through seven steps, or as noted "challenges" which address the client's use in a multitude of manners; including the manner of their use, the issues it caused, the reasons behind the use, the future with being sober, and how to address any relapses (The Seven Challenges, 2017).

The TC is a well-established model of residential treatment for adults that has been adapted for the treatment of adolescents, and is regarded as the best known residential treatment model (University of Georgia, 2008). The TC approach views addiction holistically, as the external behavioral expression of a complex combination of personal and developmental problems. Adaptations of the approach for an adolescent population include "increased emphasis on recreation, a less confrontational stance than is found in adult programs, more supervision and evaluation by staff members, assessment of psychological disorders, a greater role for family members in treatment, and more frequent use of psychotropic medication for emotional disorders" (Morral, Jaycox, Smith, Becker, & Ebener, 2003, p. 215). Residential treatment utilizing this model calls for 6–12 planned months of stay (University of Georgia, 2008). An evaluation without random assignment showed that the Phoenix Academy TC approach was superior to matched controls receiving treatment as usual on measures of substance use and psychological adjustment (Morral, McCaffery, & Ridgeway, 2004). TC has been found to be an effective treatment for substance use disorders, but still is lacking a high amount of randomized controlled trials to be fully understood as an evidence-based practice (De Leon, 2010).

Interventions That Work—Features of Successful Programs

Although there is tremendous variation in the approach taken to the residential treatment of adolescent substance abuse, researchers have begun to identify common key elements and features most often related to positive outcomes. Kaminer (1994, p. 208) listed the common elements of adolescent alcohol and drug treatment programs including "individual counseling, individual therapy, self-help groups, substance abuse education, random urinalysis for psychoactive substances, breathalyzer testing, family therapy or involvement or both, relapse prevention techniques, educational or vocational counseling, legal assistance, various types of group activities or therapies, contingency contracting, medications, and pencil-and-paper assignments relating to the recovery process."

Research has consistently demonstrated a positive association between longer duration of residential treatment and positive posttreatment outcome (Latimer, Newcomb, Winters, & Stinchfield, 2000), although short length of treatment is often confounded with premature treatment termination. In one evaluation of residential treatment,

treatment completers were 3–4 times more likely to show improvement than were noncompleters (Winters et al., 2000). In an investigation of the role of client factors in treatment retention, Edelen et al. (2007) reported that positive self-attitude, problem recognition, and having a strong social network predicted retention in care for 90 days or more (a known predictor of better outcome post discharge). Hair's summary of the treatment literature emphasizes the need for programs to be "multimodal, holistic, and ecological" in order to achieve maximum effectiveness (Hair, 2005, p. 551). Family involvement has consistently been cited as a key factor in achieving positive outcomes and post treatment maintenance of gains (Frensch & Cameron, 2002).

Despite significant evidence that family contact and involvement in treatment are positively associated with improved response to treatment, a survey of parents with children in residential care found that most programs restrict parent–child contact during initial adjustment periods to care, and treat contact as a privilege that must be earned through point or level systems (Robinson, Kruzich, Friesen, Jivanjee, & Pullman, 2005). The authors argue that policy, licensing, and accreditation standards should be written to support the value and need for early, frequent, and meaningful contact with family during residential care.

In a survey evaluation of 144 highly regarded adolescent substance abuse treatment programs (Brannigan, Schackman, Falco, & Millman, 2004), a panel of 22 experts identified 9 key elements of effective treatment programs. The nine features they identified included (1) proper assessment and treatment matching, (2) a comprehensive integrated treatment approach, (3) family involvement in treatment, (4) a developmentally appropriate approach, (5) engagement and retention in treatment, (6) employing qualified staff, (7) providing gender-specific and culturally competent care, (8) continuity of care, and (9) assessment of treatment outcome.

Interventions That Might Work—Application of Evidence-Based Practices in Residential Settings

Given the inherent complexity and heterogeneity of residential treatment, efforts have been made to incorporate and/or integrate those evidence-based practices that have shown success in adolescent substance use treatment in general. The National Institute on Drug Abuse (NIDA) has identified several specific treatment models that are evidence-based for adolescent substance abuse treatment. These include, cognitive behavioral therapy (CBT) and CBT-based approaches, motivational enhancement therapy (MET), adolescent community reinforcement approach (ACRA), contingency management (CM), multi-systemic therapy (MST), brief strategic family therapy (BSFT), family behavior therapy (FBT), functional family therapy (FFT), and multidimensional family therapy (MDFT) (National Institute on Drug Abuse, 2014). In addition to these interventions, group therapy and psychoeducational sessions are consistently used in a variety of treatment settings with adolescents (University of Georgia, 2008). While these treatments are considered

evidence based, since they are not empirically supported by research in residential settings we have put them under this “might work” section.

CBT is a broadly utilized model of care that has been adapted for the treatment of adolescent substance abuse and other psychiatric disorders. Cognitive behavioral approaches are, as the name suggests, a combination of behavioral and cognitive therapies. These therapies view addictive behavior as shaped by a combination of environmental reinforcements, thoughts, emotions, and expectations. CBT for drug and alcohol abuse involves the identification of environmental triggers of behavioral and affective sequences, rehearsal and utilization of alternative responses to raving and/or drug-seeking behavior, identification and manipulation of new sources of reinforcement, and learning of coping skills.

In the treatment of addictions, CBT has been combined with MET, as a complementary treatment approach that focuses on enhancing client motivation by facilitating movement across stages of change (Prochaska & DiClemente, 1992) from precontemplation through active and sustained change. MET is particularly focused on the role of self-determination in making behavioral change. Given the developmental significance of autonomy during adolescence, it is believed that MET is particularly suited to the treatment of this population.

MET combined with cognitive behavioral treatment (MET/CBT) has been successful in the treatment of adult substance abuse, has been adapted for adolescent development, and has been manualized (Sampl & Kadden, 2001). MET/CBT has been shown to be cost-effective.

ACRA is an intervention that focuses mainly on reinforcers and influences on drug use. These negative reinforcers are identified and positive, healthy replacements are sought, such as vocational, social, or educational reinforcers. Once replacements have been achieved, the clinician selects one of the 17 ACRA procedures to address the client’s communication, coping, and problem-solving skills and thus, to promote the client’s participation in positive activities. Role-playing is also utilized in this model and the caregiver is encouraged to participate in the treatment in both individual and joint sessions (Winters et al., 2014).

CM uses minor incentives for successful attendance and achievement in substance abuse treatment. These incentives can include items such as movie tickets, personal gifts, or even cash vouchers in exchange for successes and the discontinuation of drug use. This practice works in hope of diminishing the impact of drug use reinforcement on the adolescent and replacing it with more positive reinforcements. This approach can also be continued within the home after treatment if parents are trained on its use.

In addition to these behavioral approaches, family therapies have been shown to be effective as well. To begin, MST addresses the family and the adolescent’s characteristics in regard to the drug use; such as the family’s conflicts or other members’ substance abuse and the adolescent’s viewpoint because of each. Community characteristics are also addressed in regard to the adolescent’s substance abuse, such as his or her peer group, school environment, and neighborhood culture. The therapist will work with the family as a whole but also conducts individual sessions with members and the adolescent.

BSFT focuses more on the family interactions in general, and less on specific characteristics of the family or community. The therapist in this model would build rapport with each individual member and takes note of the interactions between all members. After conducting observations of the family as a whole as well as individual sessions with members, the therapist helps the family with habitual negative interactions. This therapy is labeled as brief because it lasts on average 12–16 weeks.

FBT uses CM in combination with a behavior contract to address substance abuse as well as other problematic behaviors in partnership with a parent or caregiver. Behavioral strategies are selected by the adolescent and a caregiver, which are then taught by the therapist to them to use at home. Then, behavior goals are set and reinforced with rewards at sessions for completing them.

FFThighlights unhealthy family behaviors that underlie the adolescent's problematic behaviors. This model engages family members in treatment and uses behavioral techniques to modify the family's communication, conflict, and behavioral issues to interact in a healthier manner. Strategies used in this therapy include behavior contracts, teaching of problem-solving and communication skills, and CM.

MDFT is a family and community based therapy for adolescents with high-risk behaviors and substance abuse, especially ones with severe abuse. The main goal of this therapy is to educate the family on the adolescent's issue as well as assist in the family's collaboration and communication with other relevant systems involved, such as the school or the juvenile justice system (National Institute on Drug Abuse, 2014).

Family-based treatments have been proven effective with substance use disorders, externalizing disorders, school and behavior problems associated with attention deficit/hyperactivity disorder (ADHD), and as adjuncts in the cognitive-behavioral treatment of anxiety disorders and depression (Diamond & Josephson, 2005). Family treatment can also help to improve compliance, retention, engagement, and, maintenance of treatment gains. In part, because of their focus on family relationships and social ecology, family approaches have been slow to be incorporated into residential settings where, by design, children and youth are separated from their families and live apart in an artificially constructed "therapeutic" social environment.

According to some, outpatient family therapy appears to be superior to other forms of treatment for adolescent behavior problems and substance abuse (Rowe & Liddle, 2003; Williams & Chang, 2000). The American Academy of Child and Adolescent Psychiatry Practice Parameter on Adolescent Substance Abuse agrees with this assessment citing the superiority of outpatient family approaches, including FFT, MST, BSFT, and MDFT (AACAP, 2005). However, some evidence suggests that other approaches to care may be just as effective. In an evaluation of family-based and group treatment of substance abuse, Hall and colleagues (Hall, Smith, Williams, & Delaney, 2005) found both approaches to be effective at reducing substance abuse and related problems. They could not find an advantage of one approach versus another. Many of the family therapy approaches are based in theories of adolescent development, developmental psychopathology, and structural and strategic family therapy. These approaches recognize that adolescent substance abuse often involves difficulty in regulating emotions and disturbed communication patterns within the family.

Pumariega (2006b) argues that the prolonged separation and reduced family contact that is typical of many placement experiences contributes to problems with reunification due to families reorganizing into new roles and modes of relating that exclude the child in treatment. Incorporating effective family treatment models into residential care could reduce the likelihood of this occurring by increasing regular meaningful contact and maintaining the child's "place" in the family. Others have recommended modifications of policy to promote increased family contact (Leichtman, 2006). These changes include removing family contact from the list of privileges that must be earned, inviting the family into the milieu, and awarding milieu privileges based on improvements in behavior with family.

Policy Changes Pertaining to Health Care

Since the first publication of this book in 2008, there has been a significant change in the field of mental health and substance use legislation, funding, treatment and its accessibility. While the back ground for mental health parity policy began with the Mental Health Parity Act of 1996 (MHPA) which stated that large group health plans could not impose annual or lifetime dollar limits on mental health benefits that were less favorable than any such limits imposed on medical/surgical benefits), it was through the Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act of 2008 (MHPAEA) and the Affordable Care Act (ACA) of 2010, that led to major strides in the mental health and substance use treatment world. MHPAEA is a federal law that has preserved the MHPA protections and added new protections, such as extending parity requirements to substance use disorders. MHPAEA was amended by the ACA to also apply to individual health insurance coverage. This new law requires parity for individuals with mental and/or substance use disorders. It requires that the coverage of mental health and substance use disorder services be a part of one of the ten essential health benefit (EHB) categories in non-grandfathered plans (individual and small group plans) (Center for Consumer Information & Insurance Oversight, 2016). There are some caveats to plans and their use of MHPAEA—to access more information on the regulations and additional changes made by MHPAEA and the ACA you can access more information through the Centers for Medicare and Medicaid Services (CMS) Website: *https://www.cms.gov/cciio/programs-and-initiatives/other-insurance-protections/mhpaea_factsheet.html#Summary of MHPAEA Protections*.

The expansion of the ACA has some beneficial implications for the populations addressed in this book. The ACA expanded coverage to young adults by allowing them to remain on their parent's health insurance up to the age of 26 years. The implications of this expansion on inpatient hospitalizations, specifically for mental health care were seen in a study by Antwi, Moriya, and Simon (2015) who found that compared to individuals aged 27–29 years, young adults who had been treated aged 19–25 years had increased their mental health related visits by 9%. And the percentage of those uninsured young adults who had been hospitalized decreased by 12.5%.

These are important findings when understanding youth and young adult treatment and accessibility issues, and have further implications for providers, family members, hospitals, and individuals needing inpatient treatment (Antwi et al., 2015).

Data from the 2015 National Survey of Substance Abuse Treatment Services (NSSATS) indicates that the substance use disorder treatment system is at capacity. Over 100% of beds (for substance use treatment) in residential treatment facilities, and inpatient hospitals were occupied. A percentage greater than 100 indicates that nondesignated beds for substance use treatment were also being used (SAMHSA, 2015b). This may be an implication of the increased accessibility, and coverage of substance use treatment disorders through insurance.

The Medicaid Institutions for Mental Diseases (IMD) exclusion (part of Section 1905 (a)(B) of the Social Security Act) dated 1965, prohibits "payments with respect to care or services for any individual who has not attained 65 years of age and who is a patient in an institution for mental diseases" except for "inpatient psychiatric hospital services for individuals under age 21." Because this exclusion is focused on states paying for inpatient psychiatric services, rather than the federal government, it has been a cause for concern, especially recently given the rapidly growing need for funding and accessibility to mental and substance use disorder treatment services. Because of this, CMS has been encouraging state Medicaid agencies to apply for Section 1115 waivers to allow them to use federal funds to provide substance use treatment services. Additionally since 2016, CMS made changes to the Medicaid managed care rules to allow Medicaid managed care organizations (MCOs) to pay for SUD treatment in an IMD. Since March of 2017, Secretary Tom Price of the Department of Health and Human Services has mentioned that CMS will support Section 1115 waiver applications related to SUD treatment. As of 2017, legislation has been proposed to allow Medicaid beneficiaries to be eligible for up to 60 days of residential services in an IMD facility. This includes extended the number of beds in these facilities to 40 or more.

Best Practice Recommendations

Despite the relative lack of quality research and compelling empirical evidence in favor of residential treatment, it is clear that many children and youth benefit from this level of care. The likelihood of positive outcomes can be increased by understanding the features and characteristics of the target population, borrowing from successful programs, and incorporating evidence-based practices that can be adapted to residential substance abuse programs. Even the most effective community-based practices fail to achieve positive outcomes with 20% of the youth served and there remains a compelling need for residential treatment. The following recommendations are offered.

Treatment Recommendations

- *Screening and Assessment*: Few programs do an adequate job screening and assessing the youth who enter care. Youth should be screened for psychiatric conditions, trauma, drug and alcohol use, and health conditions often associated with drug and alcohol abuse (hepatitis, HIV-AIDS, STDs, etc.). Assessment should be comprehensive, including assessments of strengths, inclusion of collateral sources of information, measures of quantity, frequency and age of first substance use, and assessment in the following domains, Developmental History, Educational/Vocational History, Social/Interpersonal History, Family History, Medical History, Legal History, Substance Abuse History, Recreational History, Trauma History, Psychiatric History, Sexual History, Mental Status, Functional Assessment and Activities of Daily Living, Objective Measures of Functioning and Symptomology, Cultural/Language Assessment, Summary and Clinical Formulation, Individual and Family Strengths and Problems, DSM-V Diagnosis, Recommendations & Initial Plan of Care. Programs should also utilize objective measures of key outcomes administered throughout treatment and utilized in real time to inform practice.
- *Engagement and Retention*: Programs must develop methods of actively engaging adolescents and their families in treatment and promoting treatment retention. Engagement and retention should be measured and tracked as part of quality improvement activities and programs should adopt methods, such as MET and family-based approaches, that emphasize engagement. Promotion of autonomy and active involvement of youth and families in treatment planning are also recommended to improve engagement.
- *Family Involvement*: Active involvement of families in treatment should occur whenever possible. Policies and procedures should be family friendly and active outreach is required. Specifically, family contact should not be contingent on program performance, families should be invited to participate in the milieu, and programs should consider making program privileges contingent on appropriate behavior with family. The families role in supporting the youth's treatment should be explicitly addressed as well as family members own use or abuse of, substances. Families should be encouraged (when safe and appropriate) to be, involved in treatment and visit youth even when reunification is not the goal at discharge. Therapists should be trained in family-based approaches and receive appropriate supervision from a qualified supervisor. Consider adopting variations of evidence-based family approaches (e.g., MST, FFT, MDFT, and BSFT) that have proven success in community settings.
- *Cultural and Linguistic Competence*: Minorities are overrepresented in residential care and programs must deliver care in a manner that is culturally and linguistically competent. Special care should be taken in making admission, decisions to avoid bias leading to disproportionate representation. Staff composition, policies and procedures, training, assessment, and treatment approaches, should be evaluated in terms of cultural and linguistic competence.

- *Discharge Planning and Aftercare*: Discharge planning should be comprehensive and consider the educational, social, and recreational needs of the youth as well as clinical and family issues. Discharge planning should be followed up with a formal aftercare and a follow-up program with specific goals and expectations. Discharge planning should begin early on in residential treatment. Connecting families, in addition, to youth to community-based services and supports is critical.
- *Telehealth or Telemedicine*: Telehealth encompasses a broad variety of technologies and tactics to deliver virtual medical, health, and education services. Telehealth is not a specific service, but a collection of means to enhance care. Specific to residential settings telehealth could be used a way to engage and involve families in the treatment process while the adolescent is in care. Telehealth could also be used to engage community providers that will in discharge planning early in the process so the transition can happen seamlessly. Finally, telehealth can be used to compensate for workforce issues that may be in issue in residential settings (e.g., not having a psychiatrist, nurse, or peer support specialists on site).
- *Trauma*: The majority of youth treated in RSAT have experienced trauma. Programs should screen for the presence of trauma and trauma-related symptoms, create a trauma-sensitive environment, train staff in the impact of trauma, and offer trauma treatment, either directly or through referral relationships with allied providers.
- *Strengths Based*: RSAT programs should borrow a page from the system of care and family-based approaches that recognize client and family strengths and use them to support the goals of treatment.
- *Drug Screens and Breathalyzers*: Drugs screens and breathalyzers are useful as ongoing supports for sobriety.
- *Medications*: RSAT programs should consider psychiatric medication when appropriate for co-occurring psychiatric conditions and must also guard against over medication and overuse of substances to contain behavior. Use of psychotropic medications should for treatment of specific substance abuse disorders should be considered, especially Buprenorphine for the treatment of opioid dependence. Appropriate stimulant therapy for ADHD should be viewed as protective against substance abuse; however, the potential for abuse or sale to other should be addressed.
- *Naloxone injection*: RSAT programs specifically for opioid addiction should have Naloxone injection and naloxone prefilled autoinjection device (Evzio) on hand. These are used along with emergency medical treatment to reverse the life-threatening effects of a known or suspected opiate (narcotic) overdose.
- *Avoid Punitive Approaches*: Programs that are overly rule-oriented and focus on compliance rather than treatment progress do not produce positive outcomes. Beware of the deterioration of point and level systems into a punitive staff culture and do not confuse behavioral containment with treatment.
- *Harm Reduction*: A focus on harm reduction that emphasizes the primary risks associated with drug and alcohol abuse and strategies to reduce those risks is warranted.

Organizational Recommendations

- *Multidisciplinary Staff*: The complex and diverse needs of youth entering RSAT requires a multimodal approach and multiple specialties. Staff should be prepared to provide assistance with education, vocation, legal issues, health and wellness, psychiatric needs, recreation and socialization, family, and general life skills.
- *Quality Improvement*: Internal standards should be set and monitored through a comprehensive quality improvement program. Benchmarking against past performance and other programs is highly recommended.
- *Standards of Care*: Licensing, accrediting, and other regulatory standards can improve the overall quality and consistency of care. Higher standards should be encouraged and pursued.
- *Appropriate Reimbursement*: Policymakers should be certain that rate setting methodologies take into consideration all the costs associated with delivering high-quality care. Rates should be sufficient to support the elements of care known to contribute to successful outcomes.

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