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Recovery High Schools in Massachusetts: A Promising, Comprehensive Model for Adolescent Substance Abuse and Dependence

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Summary
Below please provide a brief summary of this resource. If an abstract is available, feel free to copy and paste it here.

The purpose of this report is to present the concept, and describe early implementation findings, of the Recovery High Schools in Massachusetts. Underwritten with funds from the Department of the Public Health, the Recovery High School is a comprehensive, multi-service alternative high school serving adolescents with substance abuse and dependence problems. Three unique sites, located in Beverly, Boston, and Springfield, have completed their first year (2006-2007) of a five-year operational period.

Sources of evidence used to prepare this report included individual interviews with program directors and staff, site visits to programs, select case record reviews of youth enrolled in the program, personal interviews with three participating students, document review from the three schools, and a comprehensive literature search on the prevalence and treatment of adolescent substance abuse nationally.

Recovery High Schools in Massachusetts: A Promising, Comprehensive Model for Adolescent Substance Abuse and Dependence

Thomas T. Kochanek, Ph.D.

This paper was prepared for the Governor's Interagency Council on Substance Abuse, Commonwealth of Massachusetts. The opinions expressed reflect those of the author and not necessarily the position or policy of the Interagency Council.

February 2008

Author's Note

The purpose of this report is to present the concept, and describe early implementation findings, of the Recovery High Schools in Massachusetts. Underwritten with funds from the Department of the Public Health, the Recovery High School is a comprehensive, multi-service alternative high school serving adolescents with substance abuse and dependence problems. Three unique sites, located in Beverly, Boston, and Springfield, have completed their first year (2006-2007) of a five-year operational period.

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Table of Contents

Executive Summary

Even in the presence of the most favorable circumstances, the journey into and through adolescence is a perilous period in lifespan development. One of the most hazardous behaviors confronted during this period involves substance use and misuse. Recent epidemiologic data on the prevalence of adolescent substance abuse are both alarming and frightening. National data reveal that 78% of high school students have experimented with alcohol, and it is estimated that approximately 10% of adolescents suffer from alcohol and drug abuse. In Massachusetts, of the one-half million 12-17 year olds statewide, it is estimated that 23% use alcohol regularly, 14% engage in binge drinking, and 5% use illicit drugs. Tragically, alcohol and substance abuse are associated with increased dropout from school, poor academic achievement, drink and drug driving, delinquency, and early pregnancy. Additionally, positive correlations have been reported between substance use and suicide, depression, ADHD, anxiety disorders, and conduct disorders. Given that the needs of these youths span across the educational, physical health and wellness, behavioral health, juvenile justice, and Juvenile Court systems, public schools do not have the capacity and resources essential to fully respond to the complex and comprehensive service needs of these youth and their families.

In Massachusetts, the response to the ever increasing problem of adolescent substance abuse has been measured and deliberate. In fact, the Governor's Interagency Council on Substance Abuse, in collaboration with the Department of Public Health, has exerted convincing leadership to launch a response to the problem. The Interagency Council identified a promising model of adolescent treatment called the Recovery High School. The Recovery High School is an alternative, multi-service secondary school for

adolescents with substance abuse and dependence problems. In addition to offering a full academic program leading to high school graduation, the school incorporates numerous service components to support a youth's commitment to recovery (e.g. linkage with a recovery treatment program, teaching avoidance behaviors and promoting resiliency, supporting families, accessing behavioral health support when necessary, coordinating multi-agency involvement, and facilitating a transition to the youth's high school of residence where desirable and appropriate).

Three Recovery High Schools (Beverly, Boston, and Springfield) launched their programs in September, 2006. Their initial year of operation was marked by numerous accomplishments and achievements, some of which were as follows.

- Ninety-seven youth were referred to the schools during the 2006-07 academic year. Of these, 72% remained in school and completed the school year. Given the complex histories of these adolescents and their families, this is a noteworthy achievement.
- Schools have created a full academic curriculum with instructional materials and syllabi that meet the Massachusetts Curriculum Frameworks and therefore, eventuate in high school graduation.
- An individualized learning contract has been developed for each student that includes a core academic schedule in addition to multiple layers of support and protection to prevent relapse and regression both during and after school hours.
- Forty-nine percent of enrolled youth had no positive urine screen during their Recovery High School experience. Thirty-one percent had 1-2 relapse

incidents. As such, 80% of youth were able to maintain a high level commitment to their own self-recovery during this school experience. Given that these youth entered the Recovery High School with, on average, three year histories of polysubstance abuse, this is an impressive reversal of prior self-destructive and addictive behavior.

- The majority of youth have earned report card final average grades in the A-B range. This would suggest that students are requiring course credits essential for high school graduation and subsequent pursuit of continuing education. Given the substance use histories and number of youth with confirmed DSM-IV diagnoses, this is also a remarkable achievement.
- Case record reviews and personal interviews with three youth in the school revealed that the program has had an enormous, positive impact on the student's behavior and commitment to sobriety. Youths acknowledged that their sense of self-worth and self-concept has been restored, that feelings of hope and optimism have been inculcated, and that their ability to enter into meaningful, non-contingent, caring relationships has been restored. Moreover, the youth's capacity to appreciate the joys and richness of life without substances has been solidly developed.

In summary, the three Recovery High Schools in Massachusetts have had an enormously productive initial year of operation. Moreover, preliminary data gathered on youth engaged in the program have revealed encouraging findings and positive trends. While more precise data need to be collected to document changes in substance use

behavior and academic and social/emotional competency of youth, it appears that these RHSs are sufficiently mature to participate in a more thorough assessment of outcomes.

Information gathered on the first cohort of RHS youth has disclosed that these three sites have enrolled some of the Commonwealth's more complex and high risk adolescents and their families. Altering the developmental pathway for these youth will require the expertise, energy, and persistence of the education, public health, and behavioral health communities. Absent this commitment, the future course of these youth is replete with enormous jeopardy. Data reported herein suggest that it is indeed feasible to reduce this jeopardy. Within an era of scarce resources, it is imperative to continue to serve and support these youth while concurrently attending to important questions of program efficacy and cost effectiveness. Neither our adolescent population nor the Commonwealth's taxpayers need and deserve any less.

Recovery High Schools in Massachusetts: A Promising, Comprehensive Model for Adolescent Substance Abuse and Dependence

The Problem

Even in the presence of the most favorable circumstances, the journey into and through adolescence is a perilous period in lifespan development. Factors that complicate the transition into adolescence include an emerging interest in independence and sexual behavior, diminished control of parents and families, potent commercial advertising, and an increasing focus on consumption, self-gratification, and egocentricity. One of the most hazardous behaviors confronted during this period involves substance use and misuse.

Recent epidemiologic data on the prevalence of adolescent substance abuse are both alarming and frightening. More specifically, it is estimated that approximately 10% of adolescents suffered from alcohol and drug abuse in the United States in 2003 (Substance Abuse and Mental Health Services Administration (SAMHSA), 2004). With regard to substance use, results from the Monitoring the Future Survey (2004) reported that 78% of high school students have experimented with alcohol. Furthermore, the Youth Risk report (Grunbaum, Kann, and Kinchen, 2004) revealed that 28% of students nationwide engaged in episodic heavy drinking.

Increased rates of alcohol abuse are associated with the abuse and dependence of illicit drugs. Results from the National Household Survey (U.S. Department of Health and Human Services, 2003) indicated that 65% of youths between 12-17 years who were heavy drinkers also used illicit drugs compared to 5% of adolescent who were non-drinkers. Moreover, 72% of adolescents who were both smokers and heavy drinkers also used illicit drugs compared with only 4% of youths who did not drink or smoke.

In the most recent survey of students in grades 8-12 nationally pertaining to substance use (Monitoring the Future, National Institute of Drug Abuse, 2007), findings revealed both positive and negative trends. Of encouragement were data that indicated that since 2001, the annual prevalence of any illicit drug use has decreased by 32% for eighth graders, 25% for tenth graders, and 13% for twelfth graders. Of great concern was the finding that prescription drug use remained unacceptably high with 15.4% of high school seniors disclosing non-medical use of at least one prescription medication within the last year.

Massachusetts is not immune to these trend data. Of the one-half million 12-17 year olds statewide, it is estimated that 23% use alcohol regularly, 14% engage in binge drinking, 13% use marijuana, and 5% use illicit drugs (SAMHSA, 2004). The consequences to these behaviors are both critical and comprehensive. Alcohol and substance abuse is associated with increased dropout from school, poor academic achievement, drink and drug driving, delinquency, early pregnancy, and family strife (Friedman, Kramer, Kreisher, and Granick, 1996; SAMHSA, 1998). Early onset of drug use is associated with a poorer prognosis in adulthood (Fergusson, and Horwood, 1997; Anthony and Petronis, 1995). Studies have suggested that 15 years is a critical age with initiation prior to this age associated with greater intensity of drug use (Robins and McEvoy, 1990).

The comorbidity of substance use and other mental health disorders amplifies the significance of these data. Positive correlations have been reported between substance use and suicide, depression, ADHD, anxiety disorders, and conduct disorders (Kandel, et al., 1999; Fergusson and Horwood, 1997; Shaffer et al., 1996). Moreover, substance abuse problems do not occur in isolation but are nested within a cluster of antecedent and concurrent problems. Family functioning variables associated with increased risk include poor and inconsistent family management practices, inconsistent discipline, poor monitoring of behaviors, and interactions characterized by hostility, anger, and rejection (Gabel et al., 1998).

Youth risk factors reported include early and persistent behavior problems, academic failure, affiliation with like-minded peers, alienation and rebelliousness, and low religiosity (Williams et al., 1996). Peer influences have also been implicated,

particularly affiliation with deviant and substance abusing peers (Elliot and Menard, 1996).

Alternative Models of Intervention: What is Effective?

While the knowledge base on the definition, prevalence, etiology, and outcomes of adolescent substance abuse is extensive, the empirical evidence on the efficacy of alternative interventions is scarce and inconclusive. Recent literature reviews have categorized treatment programs into four clusters: 1) family-based interventions; 2) cognitive behavioral therapy; 3) Twelve-Step-based approaches; and 4) therapeutic communities (Deas and Thomas, 2001; SAMHSA/CSAT Treatment Improvement Protocol, 1999, Jainchill, 2000; and Williams and Chang, 2000).

Regarding family-based interventions, in a meta-analysis of studies on family therapy (Stanton and Shadish, 1997), superior findings were reported over other modalities of treatment including individual counseling, peer group therapy, and family psycho-education. However, no conclusive evidence was reported that identified any particular approach of family therapy over another. Several studies have reported promising effects of various family-based interventions as well (Friedman, 1989; Lewis, et al., 1990; and Henggeler et al., 1991).

Cognitive and behavioral (CBT) models conceptualize substance abuse and related disorders as learned behaviors. As such, this approach focuses on managing urges and cravings, anticipating and avoiding high risk situations, self-regulation skills, drug and alcohol refusal skills, problem-solving, assertiveness, mood regulation, modeling, and behavior rehearsal (Waldron and Kaminer, 2004; Monti et al., 1995). In numerous studies that have examined the efficacy of this approach, (Kaminer and Waldron, 2004;

Weinberg et al., 1998; Waldron et al., 2004), overall, findings have provided support for both group and individual cognitive-behavioral interventions. In short, numerous studies have revealed that outpatient CBT treatment can be effective in reducing adolescent substance abuse and related problems. It is important to note, however, that relapse was a consistent problem for youths across studies. More precisely, approximately 50% of youth studied reported periods of ongoing relapse and recovery, and two-thirds were still reporting substance use or other problems one year after treatment was initiated (Dennis et al., 2004).

Despite the fact that 12-Step-based programs have been the most prevalent form of treatment over the last three decades, there is a paucity of well-controlled studies that have examined its efficacy. Conceptually and philosophically, spirituality is a key element in the process. There is an emphasis on adherence to the 12 steps, sharing with others with similar problems in a group meeting, and having a sponsor who is available at all times. In a recent evaluation of the 12-Step program (Winters et al., 2000), it was reported that youth receiving treatment had better outcomes compared with those who did not receive or did not complete treatment. As such, while there is preliminary evidence of the value of the 12-Step program, an urgent need exists for more thorough and longitudinal studies.

Lastly, the therapeutic community (TC) is a comprehensive, “community as method” model that combines the core principles of AA with a social learning model. Deleon (1997; 2000) describes the multiple components of the model to include: 1) community separateness; 2) a community environment with structured activities; 3) peers and staff as community members; and 4) peer encounter groups, awareness training and

emotional growth training. The majority of adolescent TCs recommend a 6-12 month planned duration of treatment. A core feature of TC treatment is that the community serves as the therapist. Although youth may have a primary counselor with whom they work individually, everyone in the community, including the adolescents themselves, has responsibility as a therapist and teacher. Peer group meetings led by an adolescent with a staff facilitator are common.

In a recent, large study of the TC model for adolescents (Jainchill et al., 2000), data were obtained on approximately 900 youth who entered one of nine different sites nationally. One-year post treatment outcomes revealed significant reductions in drug use as well as significant reductions in criminal activities and arrests. Follow-up studies are currently being conducted to ascertain the sustainability of these promising findings.

In summary, available evidence suggests that the majority of adolescents who enter a substance abuse treatment program have significantly reduced substance usage and improvement in life functioning in the year subsequent to treatment (Williams and Chang, 2000). However, in the absence of random assignment of youth to treatment vs. control groups, the extent to which improvement can be attributed to treatment, spontaneous recovery, regression to the mean, or a placebo effect is uncertain.

Although no data exist that identify the superiority of a specific treatment, there is a core of operating principles and concepts that can be derived or inferred from the efficacy literature. First, treatment must be conceptualized as a continuum of care with multiple components that are used selectively consistent with the presenting circumstances of the youth (i.e. physically, socially, emotionally, and educationally). The recovery process is initiated by establishing a period of abstinence, and subsequently

evolves over time with periods of use or other behavioral reversals. Youth become connected with various treatment components depending on their growth and change over time (Center for Substance Abuse Treatment, 1999).

In an attempt to clarify those program characteristics essential to effective treatment, Drug Strategies, a research institute, recently convened a panel of national experts to identify empirically based features of efficacious programs (Brannigan et al., 2004). Nine key elements were identified.

- Conduct ongoing assessment and match youth needs and developmental status with responsive program components.
- Create a comprehensive, integrated treatment model with multiple components (e.g. recovery, education, recreation, community involvement, social/emotional competency, behavioral health).
- Actively engage family members in the treatment program for youth.
- Create a developmentally appropriate program that is consistent with the needs, interests, and maturity of youth.
- Establish a climate of trust and meaningful relationships between youth and adults.
- Recruit competent staff and provide opportunities for clinical supervision and ongoing professional development.
- Ensure cultural, social, and gender competence and sensitivity in all program components.
- Provide comprehensive information and referral services to youth and their families and include specific aftercare and follow-up components.

- Gather data on youth characteristics, program exposure, and outcomes and benefits both during and after program enrollment.

Given that the needs of youth with substance abuse and dependence challenges span across the education, physical health and wellness, behavioral health, juvenile justice, and Juvenile Court systems, existing public high schools do not have the capacity and resources to fully respond to this complex population of youth and their families. As such, a critical need exists in Massachusetts for an intervention model that integrates and coordinates the care-giving and support systems that these youth so desperately require.

The Recovery High School Model: Principles and Conceptual Framework

In Massachusetts, the response to the ever increasing problem of adolescent substance abuse has been measured and deliberate. In fact, the Governor's Interagency Council on Substance Abuse, in collaboration with the Department of Public Health (DPH), has exerted convincing leadership to launch a response to the problem. Consistent with the literature cited above, the Interagency Council identified a promising model of adolescent treatment called the Recovery High School. In brief, the concept of a Recovery High School (RHS) was initially underwritten by an award from the Robert Wood Johnson Foundation to the Albuquerque Public School District in 1992 (Diehl, 2003). Although a rigorous evaluation study was not conducted in this original site, nevertheless, it was determined that the concept of a Recovery High School incorporated many of the principles described above.

In order to explore the feasibility and outcomes associated with a recovery High School, DPH issued a competitive RFR in 2006 with an intention to financially support

three such high schools statewide for a five-year experimental period. Three sites were ultimately selected and initiated their developmental work in the fall of 2006.

Northshore Recovery High School
Affiliated with the Northshore Education Consortium
Beverly, MA

William J. Ostiguy High School
Affiliated with Action for Boston Community Development, Inc., Cushing House/Gavin Foundation, Inc., and the Boston Public Schools
Boston, MA

SAFE Recovery High School
Affiliated with the Springfield Public Schools
Springfield, MA

In brief, the identity of the Recovery High School incorporates the structure of the therapeutic community but also attempts to integrate the nine principles of effective programs previously cited. Viewed conceptually, the Recovery High School appears as follows.

Evident in Figure 1 is a portrait of an alternative high school that incorporates eight distinct though highly integrated components. While the objectives of academic competency and progress toward high school graduation are a primary focus, there is an equal commitment to a comprehensive recovery program that includes an individualized contract with the youth, commitment to the 12-Step program, linkage with a behavioral health clinician when necessary, family support, and comprehensive care management and resource coordination. While there is a moderate degree of fidelity to all of these integrated program components, each of the three sites has developed its own unique

identity consistent with the population it serves and the community context in which it operates.

Preliminary Findings

As previously indicated, the three Recovery High Schools began enrolling youth in the fall, 2006. Descriptive data were gathered throughout the year that assists with understanding the youth population served and preliminary outcomes of services provided. Information pertaining to youth served throughout the 2006-07 school year is presented in Table 1. Major findings were as follows.

- Ninety-seven youth were referred to the three schools throughout the year. Beverly served the highest number of students and also had the most diverse list of referral sources and participating school districts. Seventy-six percent of youth referred in Boston emanated from substance abuse programs. Of interest is that despite the fact that these programs are affiliated with public school districts, only 14% of referrals occurred from within these districts. Lastly, 33% of referrals were initiated by the youth or a family member.
- Of the 97 youth referred, 38% completed the school year and have returned for school year (SY) 2008. Fifteen percent of enrolled youth graduated with a high school diploma, and 19% returned to their high school of residence. As such, 72% of youth referred have made positive, durable connections with school. This is a noteworthy achievement. Twenty percent of youth either dropped out or were terminated from the program due to non-compliant behavior with their individualized contracts.

- Upon enrollment, youth were, on average, 16.2 years of age. Gender distribution was approximately equal (M=54%; F=46%). The majority of youth were White (77%) although substantial variation was evident in racial distribution among the three programs. It is noteworthy that the racial distribution of program youth significantly varies from the racial distribution in the communities served by these Recovery High Schools. While the underlying reasons for this disparity are not evident in these data, this is an issue that warrants clarification by program directors.
- With regard to the behavioral health status of youth, consistent with expectations, 100% were diagnosed (DSM-IV) with a substance related disorder. Other prevalent diagnostic categorizations included bi-polar disorder (42%), depression (27%), adjustment disorder (23%), ADHD (19%), and anxiety disorder (18%).

Table 1

Number and Sources of Referrals

	Beverly	**Boston**	**Springfield**	**Total**
School district	3	1	10	14 (14%)
Substance abuse program	9	16	1	26 (27%)
Behavioral health program	2	-	-	2 (2%)

DSS	3	1	2	6 (6%)
DYS	3	-	7	10 (10%)
Court	5	-	1	6 (6%)
Parent	14	2	7	23 (24%)
Youth self-referral	1	1	7	9 (9%)
Other family member	1	-	-	1 (1%)
Total	41	21	35	97

School Districts of Residence for Referred Youth

	Beverly	Boston	Springfield	Total
No. of school districts	18	13	8	39

Youth Enrollment Status as of 6/30/07

	Beverly	Boston	Springfield	Total
Completed 2007 school year; will return in 2008	22	10	5	37 (38%)
Dropped out	1	1	4	6 (6%)
Terminated	3	2	9	14 (14%)
Graduated	7	6	2	15 (15%)
Returned to high school of residence	6	2	10	18 (19%)

Transferred to treatment program	2	-	5	7 (7%)
Total	41	21	35	97

Average Youth Age Upon RHS Enrollment

	Beverly	**Boston**	**Springfield**	**Total**
Age	16.3 yrs.	16.2 yrs.	16.1 yrs.	16.2 yrs.

Youth Gender

	Beverly	**Boston**	**Springfield**	**Total**
Male	23	10	19	52 (54%)
Female	18	11	16	45 (46%)
Total	41	21	35	97

Youth Race

	Beverly	**Boston**	**Springfield**	**Total**
White	39	17	19	75 (77%)
African-American	1	1	1	3 (3%)
Hispanic	1	1	12	14 (14%)
Mixed racial	-	2	3	5 (5%)

Total	41	21	35	97

DSM-IV Diagnoses of Enrolled Youth

	Beverly	**Boston**	**Springfield**	**Total**
Substance Related Disorder	41	21	35	97 (100%)
Sleep Disorder	-	-	15	15 (16%)
Schizophrenia; psychosis	-	-	5	5(5%)
Mood disorder	-	-	14	14 (14%)
Anxiety disorder	8	-	9	17 (18%)
Adjustment Disorder	-	-	22	22 (23%)
Depression	20	6	-	26 (27%)
Bi-polar	36	5	-	41 (42%)
ADHD	18	-	-	18 (19%)
PTSD	15	-	-	15 (16%)

Table 2 presents data on the substance use histories of youth upon referral. Noteworthy observations are as follows.

- The average age of youth at their first substance use was 12.9 years of age or approximately middle/junior high school level. Substances most frequently abused included weed/hash, alcohol, cocaine, nicotine, and hallucinogenic drugs.

- Many youth reported prior experiences with other treatment programs. Sixty percent were enrolled in inpatient treatment programs and 56% had attended AA meetings.
- With respect to behavioral health services, 38% of youth were placed in residential treatment centers and 33% received outpatient therapy/counseling services prior to RHS referral.
- Many of these youth reported histories of linkages with other programs and agencies. More precisely, 55% disclosed prior involvement with Juvenile Court, 33% with DSS, and 30% with special education programs.

Table 2

Substance Use History of Enrolled Youth

	Beverly	Boston	Springfield	Total
Alcohol	100*	100	98	99
Cocaine	80	86	63	76
Crack	60	67	20	49
Weed/hash	100	100	100	100

Heroin	30	57	11	33
Non-Rx methadone	-	0	3	1
Other opiates	75	0	49	41
PCP	10	81	23	38
Other hallucinogens	90	67	49	69
Methamphetamines	5	5	-	3
Other amphetamines	75	48	11	45
Other stimulants	-	0	20	7
Benzodiazepines	60	86	29	58
Other sedatives	35	0	-	12
Inhalants	25	24	11	20
Over the counter	90	33	14	46
Nicotine	10	100	100	70

*Percent of youth

Average Age of First Substance Use

	Beverly	Boston	Springfield	Total
Age	11.2 yrs.	12.8 yrs.	14.6 yrs.	12.9 yrs.

Youth Substance Use Treatment History (Prior to RHS)

	Beverly	Boston	Springfield	Total
Inpatient treatment	29	19	10	58 (60%)
Outpatient treatment	12	2	-	14 (14%)

AA meetings	31	16	7	54 (54%)
Other (DYS lockup)	3	-	6	9 (9%)

Behavioral Health Treatment History (Prior to RHS)

	Beverly	Boston	Springfield	Total
Residential treatment	29	7	1	37 (38%)
Day treatment	16	3	-	19 (20%)
Psychiatric hospitalization	6	-	-	6 (6%)
Outpatient therapy/counseling	27	-	7	34 (35%)

System Linkages for Enrolled Youth (Prior to RHS)

	Beverly	Boston	Springfield	Total
DSS	24	6	2	32 (33%)
SPED	9	9	11	29 (30%)
504 Plan	14	1	-	15 (15%)
DYS	4	1	5	10 (10%)
Behavioral health treatment	27	13	8	48 (49%)
Court involvement	34	8	11	53 (55%)

Data with respect to substance use during the youth's enrollment with the Recovery High School are presented in Table 3.

- Regarding substance use status upon program admission, results were variable by site. While the majority of youth in Beverly and Boston were sober upon school

enrollment, 34% of youth were sober in Springfield. Springfield elected to engage a higher risk cohort of youth in that 26% were using but committed to sobriety upon entry, and 23% were using and unsure of their commitment to their own recovery. Since findings reported previously indicated a dropout rate of 37% in Springfield, staff in this program should examine the potential relationship between admission status and dropout rate.

- Youth-disclosed relapse data in Table 3 revealed that the majority of youth endure at least one regressive experience while enrolled at the Recovery High School. These findings, however, are very consistent with data previously reported for youth in other treatment programs, and should not be interpreted as an indicator of marginal program effectiveness. Findings reported for the Springfield cohort prompt questions that need to be resolved regarding the relationship between substance use status upon entry, youth commitment to self-recovery, and relapses.
- Data with respect to random urine screens for youth during their enrollment at the Recovery High School validate findings noted above. That is, at least one relapse is common for youth. An important, unanswered question that warrants thoughtful pursuit is the connection, if any, between relapse frequency and progress on other important outcome indices including academic performance and growth in social and emotional competency.

Table 3

Substance Use Status Upon RHS Enrollment

	Beverly	**Boston**	**Springfield**	**Total**
Sober	100*	100	34	78%
Sober for prior 30 days	85	100	17	67%

Using but committed to sobriety	-	-	26	9%
Using but not committed to sobriety	-	-	23	8%

*Percent of youth

Number of Relapses for Enrolled Youth

	Beverly	Boston	Springfield	Total
None	35*	48	14	32%
One	40	43	9	31%
Two	10	9	8	9%
Three	5	-	9	5%
Four	5	-	15	7%
Five or more	5	-	45	17%

*Percent of youth

Number of Positive Urine Screens

	Beverly	Boston	Springfield	Total
None	45*	76	27	49%
One	20	19	18	19%
Two	20	5	12	12%
Three	5	-	12	6%
Four	5	-	10	5%
Five or more	5	-	21	9%

*Percent of youth

Data regarding the academic status and performance and participation of youth enrolled at the Recovery High School are presented in Table 4.

- Information relative to academic competency in core areas revealed that the majority of youth were functioning at or above grade level in literacy, English/language arts, and mathematics. The area of greatest need in all three sites appeared to be in mathematics. This is a positive finding in that if youth are

committed to returning to their high school of residence or pursuing continuing education, they appear to have mastered the fundamental skills that would facilitate the pursuit of this goal.

- Data with respect to MCAS test results at Grade 10 revealed that approximately 60% of youth have successfully met the standard required for a high school diploma in Massachusetts. For youth who will re-take the test, staff should complete individualized error pattern analyses to identify areas of need, and direct instruction to these skill areas.
- With respect to report card final averages for SY 2007, findings revealed that the majority of youth have earned letter grades in the A-B range. This would suggest that students are acquiring course credits essential for high school graduation. Given the substance use histories and number of youth with confirmed DSM IV diagnoses, this is a remarkable achievement.
- Regarding school attendance and tardiness, data revealed that the majority of youth consistently attend classes and arrive promptly on a daily basis.

Finally, 15 students graduated from the three RHSs in June, 2007. Follow-up contact with these youth in December, 2007 revealed that 53% are enrolled in institutions of higher education and also hold various part-time jobs. Twenty-seven percent are working in full-time positions. For the three remaining youth, one has enlisted in Military Service, one has returned to residential treatment, and one individual could not be located.

In addition to these quantitative data, the independent evaluator also selected three case study youth for a more thorough understanding of presenting circumstances and program effects. For each youth (one from each of the three programs), all available documentation in the youth's case file was reviewed, and a semi-structured personal interview was conducted with each youth that lasted approximately thirty minutes. Summaries of these interviews and document analysis are as follows.

Case Study Youth #1 (CSY1)

CSY1 is an 18.5 year-old female who has been enrolled at a RHS for approximately one year. Her early years were characterized by positive memories. Born full-term and healthy, she was described by her mother as a "soap opera baby"; content, sociable, and a joyful temperament. At three months of age, her parents separated, later divorced, and her mother was eventually awarded custody.

Although she did very well in the elementary grades in school, CSY1's life became increasingly chaotic at home. Her mother was in active addiction and rarely at home, and her aunt (also an active addict) assumed a maternal role. She was consistently told by her mother that she was a "real disappointment" and was not living up to expectations. CSY1 began using alcohol at 12 years of age although she recalls taking sips of alcohol at a younger age at family gatherings during which she was prompted to serve drinks to adults.

CSY1 befriended another female who was alcohol dependent and they consistently shared alcohol together. Tragically, this friend and confidante committed suicide at 12 years of age. Shortly thereafter, CSY1 developed a relationship with a 22-year-old male who was a heroine addict and dealt drugs to support his habit. At this time,

she began to use and abuse a variety of drugs supplied by her male friend. Her performance in school precipitously declined and she was retained in the fifth grade due to poor grades and chronic absenteeism. She transitioned through middle school and into high school constantly using any and all drugs available.

During her initial year of high school, CSY1's behavior was brought to the attention of the Dean of Students who referred her to an inpatient treatment center. During this period, CSY1 refused to acknowledge her addictive behavior and rejected participation in the program. Ultimately, her non-compliant behavior and refusal to eat prompted her expulsion, and she was transferred to another inpatient program. In this new location, she discovered a caring, genuine, and accepting staff with whom she shared intense emotional exchanges. In her own words, CSY1 disclosed that "they loved me back to life".

After making solid progress toward recovery, CSY1 was discharged after 90 days and returned home. On her own, she uncovered information about the new Recovery High School and initiated a self-referral in the fall of 2006. Upon enrollment, she discovered a staff that was accepting, kind, respectful, and caring. She enrolled in a full academic course schedule and ended her junior year in high school with a "C" average and with an independent reading level of 11.5 (grade equivalent). During this time, she consistently attended AA meetings and was introduced to a sponsor (40 year-old woman with an intact family) who offered a caring and secure surrogate family experience for CSY1.

Despite this positive experience at the RHS, life at home continued to be challenging. Her mother refused to enroll CSY1 in a health insurance program, and

consequently, she was denied access to preventive health care, behavioral health support, and needed prescription medicines. The RHS was forced to file a 51A against the mother for inadequate care and protection, and CSY1 eventually was enrolled in the Massachusetts Health Program.

Currently, CSY1 is in her senior year at RHS. She is enrolled in a full academic course load, has a driver's license, and has been able to successfully hold three part-time jobs. She is maintaining a "B" average in her courses and intends to submit an application to a four-year college with an emerging interest in pediatric nursing. She recently completed Step 5 in the 12-Step program, and can now serve as a mentor to another individual. When interviewed, CSY1 describes herself now as "open-minded and grateful for the first time in my life"; "I never thought my life would be this good".

Case Study Youth #2 (CSY2)

CSY2 is a 17.3 year-old male who enrolled in a RHS in September, 2006. Historically, he presented a normal birth history and was described by his mother as alert, cheerful, affectionate, and sociable. As an only child, his father, an alcohol abuser, left home when CSY2 was nine months of age. At three years of age, CSY2 began to demonstrate uncontrollable, unmanageable behavior and severe temper tantrums. His child care provider filed a 51A for alleged maternal neglect and child "sexualized behavior". Upon entering kindergarten, CSY2 was referred for an evaluation for special education program eligibility due to impulsivity, aggressiveness, poor anger control, defiance, oppositional behavior, failure to demonstrate remorse, and poor social skills. He was diagnosed as "behaviorally disordered" and ADD, and was placed within a substantially separate special education classroom in his home school district.

CSY2 grew increasingly angry and defiant, befriended peers with similar anti-social behavior, became interested in pornography, and was unresponsive to consequences. He began to wear black, ripped clothes, wanted to “look evil”, wore multiple pins and bracelets, and expressed unusually dark, negative emotions in his writing. While enrolled in the seventh grade, he became addicted to marijuana and smoked multiple times on a daily basis. He also experimented with acid, cocaine, and vicodin.

Feeling overwhelmed and powerless to impose limits, his mother filed a CHINS petition seeking the power of the Court to identify a viable solution. CSY2 entered four different detention units administered by DYS, but collectively, they had little influence on his behavior. During this time, he continued to smoke marijuana daily.

He was referred by DYS to a Recovery High School in September, 2006. Upon admission, assessment data revealed a young man of above average intellect (Full Scale IQ = 125) with mild to moderate delays in core academic areas (Reading = 26th percentile; Written Language = 21st percentile; Mathematics = 33rd percentile). He expressed a commitment to recovery and maintained his sobriety for the first six months of enrollment in the school.

He was enrolled in a full academic schedule at the Recovery High School and ended the 2007 school year with an overall “C-“ average. He was absent from school on only two occasions throughout the year. Although he admits to a relapse of marijuana and cocaine in April, 2007, and again in August, 2007, he has been sober ever since.

CSY2 describes the staff at RHS as “awesome, cool, and very nice”. His perception of the school is “welcoming, accepting, sincere, and supportive”. He attends

AA meetings twice weekly, and participates in after-school DYS-sponsored adolescent groups. He describes himself as “confident, accepting, stronger, independent, and with more meaningful friends”. His current interest is to join the military after high school graduation. CSY2 candidly acknowledges that “if it were not for the RHS, I would be ‘high’ right now, re-entering DYS lockup, and probably end up incarcerated”.

Case Study Youth #3 (CSY3)

CSY3 is a 17 year-old female who entered a RHS in December, 2006. She was raised in a complex family which involved domestic violence, a substance dependent mother, and a sister who suffered from alcohol dependency and a chronic anxiety disorder. Her experiences in the early grades in school were positive until a school transfer prompted feelings of social isolation. At age 11 years, she introduced herself to alcohol by finishing leftover drinks after Thanksgiving dinner. By age 13 years, she had graduated to daily use of alcohol, cocaine, and amphetamines. Although she wanted desperately to enter a relationship with a male, such relationships were characterized by violence and abuse. She became increasingly angry, antagonistic, and disruptive, and was sent to a boarding school in 2004. At that time, she was suffering from acute depression, self-destructive behavior, and daily polysubstance abuse.

Due to violent and defiant behavior and chronic drug use, she was asked to leave this boarding school. She transferred to a middle school within a public school district and was repeatedly suspended for fighting. Her non-compliant behavior escalated and she was sent to “boot camp” in Utah at 15 years of age. Upon completing this program, CSY3 returned to Massachusetts and entered four different treatment programs which

ultimately had marginal influence on her behavior. She was referred to a RHS from her last program in November, 2006 and subsequently entered the RHS one month later.

During her junior year at the RHS, she enrolled in a full academic course load and concluded the school year with an overall “A-“ average. Her individual recovery plan includes AA meetings 3-4 times weekly and outpatient individual and group counseling. She has transitioned from an angry, impulsive, and impatient individual to a competitive, sociable, active, self-determined, and self-reflective young woman. She intends to apply to a four-year college with expressed interests in psychology, creative writing, or education.

When prompted to identify the uniqueness of the RHS, she stated that “This school teaches you what you can do without drugs and how you can be successful”. She reports having benefited from the meaningful and caring relationships with staff and other students, from smaller classes with individualized support, and from equally motivated youth who are committed to their own recovery and supporting and celebrating their friend’s recovery.

Summary, Implications, and Recommendations

The Recovery High School is an alternative, multi-service secondary school for adolescents with substance abuse and dependence problems. In addition to offering a full academic program leading to high school graduation, the school incorporates numerous service components to support a youth’s commitment to recovery (e.g. linkage with a recovery treatment program, teaching avoidance behaviors and promoting resiliency, supporting families, accessing behavioral health support when necessary, coordinating

multi-agency involvement, and facilitating a transition to the youth's high school of residence where desirable and appropriate).

Three Recovery High Schools (Beverly, Boston, and Springfield) launched their programs in September, 2006. Their initial year of operation was marked by numerous accomplishments and achievements, some of which were as follows.

- Ninety-seven youth were referred to the schools during the 2006-07 academic year. Of these, 72% remained in school and completed the school year. Given the complex histories of these adolescents and their families, this is a noteworthy achievement.
- Schools have created a full academic curriculum with instructional materials and syllabi that meet the Massachusetts Curriculum Frameworks and therefore, eventuate in high school graduation.
- An individualized learning contract has been developed for each student that includes a core academic schedule in addition to multiple layers of support and protection to prevent relapse and regression both during and after school hours.
- Forty-nine percent of enrolled youth had no positive urine screen during their Recovery High School experience. Thirty-one percent had 1-2 relapse incidents. As such, 80% of youth were able to maintain a high level commitment to their own self-recovery during this school experience. Given that these youth entered the Recovery High School with, on average, three year histories of polysubstance abuse, this is an impressive reversal of prior self-destructive and addictive behavior.

- The majority of youth have earned report card final average grades in the A-B range. This would suggest that students are requiring course credits essential for high school graduation and subsequent pursuit of continuing education. Given the substance use histories and number of youth with confirmed DSM-IV diagnoses, this is also a remarkable achievement.
- Case record reviews and personal interviews with three youth in the school revealed that the program has had an enormous, positive impact on the student's behavior and commitment to sobriety. Youths acknowledged that their sense of self-worth and self-concept has been restored, that feelings of hope and optimism have been inculcated, and that their ability to enter into meaningful, non-contingent, caring relationships has been restored. Moreover, the youth's capacity to appreciate the joys and richness of life without substances has been solidly developed.
- The three Recovery High Schools have conceptualized a program consistent with empirically based concepts and principles that create a context for youth success. The schools attempt to develop a solid foundation of resiliency and protective factors that minimize risk-taking behaviors and hazardous decisions both during but also subsequent to program participation.

Recommendations for the continued growth and stabilization of these schools in the future are as follows.

References

Anthony, J. and Petronis, K. (1995). Early onset drug use and risk of later drug problems. *Drug and Alcohol Dependence*, 40, 9-15.

Brannigan, R., Shackman, B., Falco, M. and Millman, R. (2004). The quality of highly regarded adolescent substance abuse treatment programs; Results from an in-depth national survey. *Archive of Pediatric and Adolescent Medicine*, 158, 904-909.

Center for Substance Abuse Treatment (1999). Treatment of adolescents with substance use disorders. *Treatment Improvement Protocol (TIP) Series 31*. DHHS Publication No. SMA 99-3282. Washington, D.C.: Department of Health and Human Services.

Deas, D. (2006). Adolescent substance abuse and psychiatric comorbidities. *Journal of Clinical Psychiatry*, 67, 18-23.

Deas, D. and Thomas, S. (2001). An overview of controlled studies of adolescent substance abuse treatment. *The American Journal on Addictions*, 10, 178-189.

DeLeon, G. (1997). Therapeutic communities: Is there an essential model? In G. Deleon (Ed.), *Community as Method. Therapeutic Communities for Special Populations and Special Settings.* Westport, CT: Praeger.

DeLeon, G. (2000). *The therapeutic community-theory, model, and method.* New York: Springer.

Dennis, M., Godley, S., Deamond, G., Tims, F., Babor, T., Liddle, H., Kaminer, Y., and Funk, R. (2004). The cannabis youth treatment study: Main findings from two randomized trials. *Journal of Substance Abuse Treatment*, 29, 40-59.

Diehl, D. (2003). Recovery high school. In *Robert Wood Johnson Anthology, To Improve Health and Health Care-Volume V.* Princeton, NJ: RWJ Foundation.

Elliot, D. and Menard, S. (1996). Delinquent friends and delinquent behavior: Temporal and developmental problems. In D. Hawkins (Ed.), *Delinquency and Crime: Current Theories. Cambridge: Cambridge University Press.*

Ferguson, D. and Horwood, L. (1997). Early onset of cannabis use and psychosocial adjustment in young adults. *Addiction*, 92, 279-296.

Friedman, A. (1989). Family therapy vs. parent groups: Effects on adolescent drug users. *American Journal of Family Therapy*, 17, 335-347.

Friedman, A., Kramer, S., Kreisher, C. and Granick, S. (1996). The relationship of substance abuse to illegal and violent behavior in a community sample of young

adult African-American men and women. *Journal of Substance Abuse,* 8, 379-402.

Friedman, A. and Utada, A. (1989). A method for diagnosing and planning the treatment of adolescent drug users. *Journal of Drug Education,* 19, 285-312.

Gabel, S., Stallings, M., Young, S., Schmitz, S., Crowley, T., and Fulker, D. (1998). Family variables and substance misusing male adolescents: The importance of maternal disorder. *American Journal of Drug and Alcohol Abuse,* 24, 61-84.

Gilvarry, E. (2000). Substance abuse in young people. *Journal of Child Psychology and Psychiatry*, 41, 55-80.

Grunbaum, J., Kann, L., & Kinchen, S. (2004). Youth Risk Behavior Surveillance. *MMRW Surveillance Summary, 2004;* 53, 1-96.

Henggeler, S., Bordwin, C., and Melton, G. (1991). Effects of multisystemic therapy on drug use and abuse in serious juvenile offenders: A progress report from two outcome studies. *Family Dynamics and Addiction Quarterly*, 1, 40-51.

Jainchill, N. (2000). Substance dependency treatment for adolescents: Practice and research. *Substance Use and Misuse,* 35, 2031-2060.

Jainchill, N., Hawke, J. DeLeon, G. and Yagelka, J. (2000). Adolescents in therapeutic communities: One-year post treatment outcomes. *Journal of Psychoactive Drugs*, 32, 81-94.

Johnston, L., O'Malley, P., and Bachman, J. (2004). *Monitoring the Future. National Results on Adolescent Drug Use: Overview of Key Findings.* National Institute on Drug Abuse; 2004. NIH Publication No. 04-5506.

Kaminer, Y. (2001). Adolescent substance abuse treatment: Where do we go from here? *Psychiatric Services*, 52, 147-149.

Kaminer, Y. and Waldron, H (2004). Cognitive behavioral therapy. In C. Rowe & H. Liddle (Eds.), *Treating Adolescent Substance Abuse: State of the Science.* New York: Cambridge University Press.

Kamon, J., Stanger, C., Budney, A., and Dumenci, L. (2006). Relations between parent and adolescent problems among adolescents presenting for family-based marijuana abuse treatment. *Drug and Alcohol Dependence*, 85, 244-254.

Kandel, D., Johnson, J., & Bird, H. (1999). Psychiatric comorbidity among adolescents with substance abuse disorders: Findings from the MECA study. *Journal of American Academy of Child and Adolescent Psychiatry*, 38, 693-699.

Lewis, R., Piercy, F. and Sprenkle, D. (1990). Family-based interventions for helping drug-abusing adolescents. *Journal of Adolescent Research*, 5, 82-95.

Mark, T., Song, X., Vandivort, R., Duffy, S., Butler, J., Coffey, R., and Schabert, V. (2006). Characterizing substance abuse programs that treat adolescents. *Journal of Substance Abuse Treatment*, 31, 59-65.

Monti, P., Rohsenow, D., Colby S. and Abrams, D. (1995). Coping social skills training. In W. Miller and R. Hester (Eds.), *Handbook of Alcoholism Treatment Approaches: Effective Alternatives.* New York: Allyn and Bacon.

Myers, M., Brown, S. and Mott, M. (1993). Coping as a predictor of adolescent substance abuse treatment outcome. *Journal of Substance Abuse*, 5, 15-29.

National Institute of Drug Use (2007). Monitoring the Future Survey Results. Rockville, MD: Office of Applied Studies, Substance Abuse and Mental Health Services Administration.

Robins, L. and McEvoy, L. (1990). Conduct problems as predictors of substance abuse. In L. Robins and M. Rutter (Eds.), *Straight and Devious Pathways from Childhood to Adulthood.* Cambridge: Cambridge University Press.

Shaffer, D., Gould, M., Fisher, P., Troutman, P., Moreau, D., Kleinman, M., and Flory, M. (1996). Psychiatric diagnosis in child and adolescent suicide. *Archives of General Psychiatry*, 53, 339-348.

Stanton, M. and Shandish, W. (1997). Outcome, attrition, and family/couples treatment for drug abuse: A meta-analysis and review of controlled comparative studies. *Psychological Bulletin*, 122, 170-191.

Substance Abuse and Mental Health Services Administration (1998). Office of Applied Studies. Driving after drug or alcohol use: Findings from the 1996 National Household Survey on Drug Abuse, Analytic Series A-8.

Substance Abuse and Mental Health Services Administraion/Center for Substance Abuse Treatment (1999). Treatment Improvement Protocol 32: *Treatment of Adolescents with Substance Use Disorders.* Washington, D.C.: National Library of Medicine.

Tarter, R. (1990). Evaluation and treatment of adolescent substance abuse: A decision tree method. *American Journal of Drug and Alcohol Abuse*, 16, 1-46.

U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Office of Applied Studies. National Survey on Drug Use and Health: National Findings. NSDUH Series H-25, DHHS Publication No. SMA 04-3964.

Waldrom, H., and Kaminer, Y. (2004). On the learning curve: The emerging evidence of supporting cognitive-behavioral therapies for adolescent substance abuse. *Addiction,* 99, 93-105.

Walrdom, H., Turner, C., and Ozechowski, T. (2004). Trajectories of change in behavioral and family interventions for adolescent substance abuse and dependence. In H. Liddle and C. Rowe (Eds.), *Treating Adolescent Substance Abuse: State of the Science.* New York: Cambridge University Piers.

Weinberg, N., Rahdert, E., Colliver, J., and Glantz, M. (1998). Adolescent substance abuse: A review of the past 10 years. *Journal of the American Academy of Child and Adolescent Psychiatry*, 37, 252-261.

Williams, R. and Chang, S. (2000). A comprehensive and comparative review of adolescent substance abuse treatment outcome. *Clinical Psychology and Science Practice*, 7, 138-166.

Williams, R., Christian, J., Gay, M., and Gilvarry, E. (Eds.) (1996). *Health Advisory Service: Children and Young People; Substance Misuse Services; The Substance of Young Needs.* London: HMS0.

Winters, K., Stinchfield, R., Opland, E., Weller, C., and Warheit, G. (2000). The effectiveness of the Minnesota model in the treatment of adolescent drug abusers. *Addiction*, 95, 601-612.