

MOST Reporter

THE CAYUGA COUNTY MOBILE OUTREACH SERVICES TEAM – TARGETED ALCOHOL AND CHEMICAL TREATMENT PROGRAM (MOST-TACT): CAYUGA COUNTY COMMUNITY MENTAL HEALTH CENTER

Volume II, No. 2
January 2007

After Two Years of Providing Services, MOST-TACT Continues to be an Effective Intervention that Maintains a High Level of Adherence to the Program Model

Introduction

The Cayuga County Mobile Outreach Services Team – Targeted Alcohol and Chemical Treatment (MOST-TACT) is being implemented by Cayuga County Community Mental Health Center (CCCMHC) in collaboration with the Partnership for Results. The project is funded by a three-year Targeted Capacity Expansion grant from the U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Treatment (CSAT). The project operates in five central New York school districts: Auburn Enlarged City, Cayuga-Onondaga B.O.C.E.S., Union Springs, Port Byron CSD, and Southern Cayuga.

MOST-TACT provides evidence-based assessment and intervention services in school settings for adolescents ages 11 and over who have substance abuse disorders that have not progressed to chemical dependence. The program model has several critical features. Clients and their families are evaluated using a multi-disciplinary, comprehensive assessment tool, the Well-Being Assessment Instrument (WellBAT). Service delivery is monitored with the Partnership's interagency database (Children At-Risk Interagency database, or CHARI). In order to address the adverse circumstances and support the strengths of the participants, MOST-TACT clinicians develop integrated service plans for all clients and their families. All clinicians employ Cognitive Behavioral Therapy (CBT) as the principal treatment modality.

The evaluation of the MOST-TACT project is being conducted by the Youth Policy Institute, Inc. (YPI), a non-profit research and evaluation agency located in central New York. YPI is employing a system-based evaluation model that examines the context, implementation, and impact of the program. The evaluation bulletin, the *MOST Reporter*, appears periodically during the course of the project to provide project staff and community members with insights on the project's implementation, administration, effectiveness, and outcomes. In the previous edition of this publication, YPI determined that MOST-TACT clinicians, as the project neared the end of its second year of operations, were managing to implement CBT with high levels of fidelity to the research-based version of the model.

This edition of the *MOST Reporter* will examine the extent to which the project staff have managed to maintain the high levels of adherence to the MOST model and the positive outcomes achieved in the first fourteen months of service delivery (January 2005 through February 2006), that were detailed in the *MOST Reporter*, Volume I, number 2 (June 2006). Toward this end, YPI conducted an analysis of program data through September 2006, comparing trends in implementation and outcomes over the last seven months of service delivery with the first fourteen months of MOST-TACT interventions. Three critical facets of these first twenty-one months of service delivery are examined: (I) the extent to

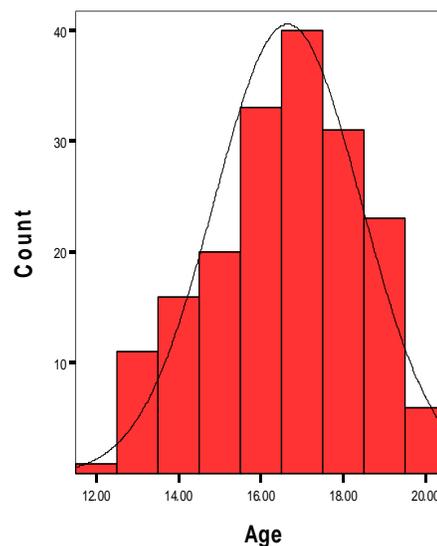
which the MOST-TACT has reached its intended target population, those most likely to benefit from the intervention; (II) the level of fidelity to the program model achieved during this early phase of the project; and (III) the impact of the program services to date. In addition, the fourth section of this edition of the *MOST Reporter* will delineate the extent to which certain independent variables, such as school, gender, and age, influence service impact.

I. Target Population

During the seven-month period from March through September 2006, 39 MOST-TACT cases were opened, compared to 143 cases in the prior fourteen months (January 2005 through February 2006). This diminishing rate of case openings is significant and, if it continues, should be of concern to project managers. For the moment, however, this drop off in referrals is an artifact of timing. It is largely due to the fact that some project clinicians occasionally had, in this recent time period, full caseloads, that schools were closed for over two of the seven months, and that September referrals levels are traditionally low, as staff become acquainted with students.

In most respects, the students participating in the program were typical of the population aged 12 to 18 and attending the target schools. The racial distribution of participants continued over time to be roughly similar to that of Auburn and its immediate hinterlands, with approximately 12% of students in the program identified as African-American, Hispanic, mixed race or other race or ethnicity. The age distribution of participants early in the project and more recently are nearly identical and roughly mirrors the likelihood of substance use disorders (SUDs) in the adolescent population, which, according to Partnership surveys, increases significantly with the age of the students. As is evident in **Figure 1**, the plurality of participants are aged 17, and participants aged 15 through 18 represent about 56% of the cases.

Figure 1: Age Distribution of MOST-TACT Participants (January 2005 – September 2006; N = 182)



The gender distribution of students served in from January 2005 through February 2006 was exactly 1:1. During the last seven months, however, the project initiated services for twice as many females than males. Since the number of students who entered the program from March through September 2006 was rather small, it is possible that this shift in gender distribution was an aberration. Nonetheless, it is of interest given that survey data regarding Auburn students indicates that substance use is more frequent among males than females.

As indicated in **Table 1**, the distribution of students in the MOST-TACT program across schools reflects, with one exception, the overall distribution of students ages 12 to 19 in the five participating school districts (Auburn, Cayuga-Onondaga B.O.C.E.S., Port Byron, Southern Cayuga, and Union Springs). For example, about 45% of MOST-TACT clients are from Auburn Enlarged City School District; the approximately 2,500 students aged 11 and over in Auburn's high school and two middle schools account for over 40% of students in that age group in the target population. One school district, Southern Cayuga, with only 5 clients, none of whom referred from March through September 2006, was substantially underrepresented in the MOST-TACT caseload.

Table 1: MOST-TACT Participants by School District and the Date Services were Initiated

School District	1/1/05 – 2/28/06		3/1/06-9/30/06	
	N	%	N	%
Auburn HS	56	39.2	15	38.5
Auburn Middle Schools	12	8.4	4	10.2
B.O.C.E.S. programs	18	12.6	0	0
Port Byron HS	12	8.4	9	23.1
Port Byron MS	11	7.7	4	10.3
S. Cayuga HS	4	2.8	0	0
S. Cayuga MS	1	0.7	0	0
Union Springs HS	18	12.6	2	5.1
Union Springs MS	5	3.5	0	0
Union Springs elementary school	1	0.7	0	0
Other	5	3.5	5	12.8
Total	143	100	39	100

Given the relatively small number of cases opened after March 2006, it is difficult to draw conclusions about the distribution of cases across schools. The failure of Southern Cayuga school district staff and administrators to make referrals to MOST-TACT continues to be a problem, despite the fact that it has been repeatedly addressed by project staff, who are employing a wide range of outreach activities. Frequent turnover in key administrative posts, including the superintendent and secondary school principals, has stymied the ability of MOST-TACT staff to sustain an effective remedial plan.

The median household income of participating families continues to be 8% below that of the county as a whole (\$37,487 as of the year 2000, according to the U.S. Census). 45% of MOST-TACT participants live in families with household incomes below \$25,000; 32% of participants live in households with incomes of \$50,000 and over.

The MOST-CSAT program continues to serve adolescents most likely to benefit from the program. From the composite evidence of the screening instrument (Observation Checklist)

completed by school staff, the student self-report Personal Experience Screening Questionnaire (PESQ), and clinical inferences recorded on the WellBATs, all clients – whether intake was early in the project (January 2005 through February 2006) or more recently (March 2006 through September 2006) – are experimenting with or actively using substances, particularly alcohol and marijuana. Initial WellBAT assessments reveal, moreover, that in both Groups, the clients and their households have complex service needs which will benefit from the core elements of the program: multi-disciplinary assessments, CBT counseling, involvement of households in the development of an integrated service plans, and comprehensive management of cases by the clinicians. The initial WellBATs indicate that MOST-TACT participants, beyond their SUDs, are affected by a wide range of adverse circumstances and co-occurring disorders. These need to be addressed in order to help clients successfully reduce substance use and to minimize the likelihood of continued use by promoting the social, emotional, and educational development of the participants.

Among MOST-TACT participants, there was no significant change over time in the adverse circumstances and co-occurring disorders experienced at the highest level of severity. For all participants, these included, in declining order of frequency:

1. Parents or siblings having a history of using alcohol, tobacco, and/or drugs (49% of the MOST-TACT participants);
2. Ready access to tobacco, alcohol, and/or drugs within or outside their home (48%);
3. Exposure of the client to violence outside the home, including being a victim of a physical threat or attack or have observed a family member, friend or stranger be physically threatened or attacked (40%);
4. Poor academic performance, including failure of two or more courses during the academic year or repeating a grade level (32%); and
5. Experiencing a stressful event within the last year, such as parents' divorce, death

of a loved one, or a family member with a severe, chronic illness (32%).

The wide range and profound nature of service needs among MOST-TACT participants are readily apparent when both severe and moderate levels of risk factors are considered; again, there was no measurable change from Group I to II:

1. Access inside and outside the home to alcohol, tobacco, and drugs (80% of the MOST-TACT participants);
2. Chaotic family management styles and unstructured expectations for behavior (75%);
3. Negative peer relationships characterized by alienation and displays of intimidation and physical aggression (75%);
4. A volatile temperament, including a tendency of the client to be easily upset and to have difficulty adapting to change (72%); and
5. Exposure to violence outside the home, including being a victim of a physical threat or attack or have observed a family member, friend or stranger be physically threatened or attacked (68% of participants).

II. Level of Fidelity to the MOST-TACT Program Model

A critical part of the YPI evaluation is to gauge the level of fidelity to the MOST-TACT model. The evaluation is using three sources of data for this phase of the evaluation: the *Cognitive Behavioral Therapy Implementation Checklist* (discussed in the previous edition of the *MOST Reporter*); information stored in the Partnership's CHARI (Children At-Risk Information) database; and staff interviews. The latter two sources indicate, as does information gleaned from the *Checklist*, a high level of fidelity to the MOST-TACT model is being maintained across its salient components.

Ongoing training, clinical supervision, and technical assistance are essential to maintaining fidelity to the MOST-TACT model, and it is

clear that such support has been provided routinely to the clinical staff throughout the project. The result has been a high level of adherence to the project model.

Observation Checklist: The Checklist is a research-based lay screening tool that serves to hone observational skills of school staff regarding behaviors linked to substance use and co-occurring mental health disorders, cognitive disabilities, and exposure to violence issues. A Partnership study of the instrument indicates that at least 2 Checklists are required to have a reliable third party indication of substance use.

For cases completed and closed from January 2005 through February 2006 (Group I) and from March 2006 through September 2006 (Group II), all clients had at least one Checklist, and over 92% had 2 or more. For these cases, the average number of Checklists increased from 4.75 in Group I to 5.5 in Group II.

Comprehensive multi-disciplinary assessment using the Wellbeing Assessment Instrument (WellBAT): MOST-TACT requires periodic multi-disciplinary assessment using the WellBAT to ensure effective, comprehensive treatment and discharge planning. The program model requires that clinicians assess clients within the first 90 days and prior to discharge. For cases open at least 90 days, initial WellBATs were generally completed in a timely manner. The few exceptions to this occurred with Group I participants more than Group II. Clinicians are also required to administer the WellBAT before the case is closed, which permits the development of a thorough discharge plan. For the closed and completed cases, clinicians failed to fully complete the WellBAT 3 times (comprising 7% of the completed cases) for Group I participants. In those instances, the final WellBATs were initiated but were incomplete due to the inability of the clinician to obtain continuing cooperation from the clients or household members. Among the Group II participants, the final WellBATs were completed in a timely manner.

Service integration and case management: Under the MOST-TACT model, clinicians must provide their adolescent clients, and where appropriate, household members with integrated service plans that provide referrals that address the risk factors and support resiliences indicated in the WellBAT. In all opened cases, in both Groups I and II, clinicians developed integrated service plans and referred clients and family members for collateral services on a routine basis. In addition, an analysis of the goals in treatment plans indicates that clinicians identifying unmet service needs in the principal assessment domains of the WellBAT (mental health, family, educational, and so on) invariably addressed all diagnosed adverse circumstances and co-occurring disorders in their treatment plans. For the Group I participants, there was an average of 8 goals per participant; this did not differ substantially for Group II, for whom there was an average of 7.8 goals per participant. For all closed and completed cases in both Groups, less than 1% of the total were not followed up by clinicians every 90 days to determine progress, and in the case of collateral services, compliance with referred services was routinely monitored, as required by the program model.

III. Program Outcomes

To gauge the program outcomes of MOST-TACT, YPI is analyzing: (1) level of improvement as measured by validated pre- and post-tests (the Youth Pediatric Symptom Checklist and Personal Experience Screening Questionnaire); (2) client-reported change in the frequency of substance use; and (3) assessments by clinicians of progress made by clients toward meeting treatment goals. In both Groups I and II, for those clients who have completed services and have their cases closed, MOST-TACT is resulting in substantial improvements, reducing substance use and improving the ability of clients to positively develop socially, emotionally, and educationally. *There is strong evidence that, regarding substance use in particular, the intervention is becoming more effective over time.*

Youth Pediatric Symptom Checklist (Y-PSC): A validated self-report instrument, the Y-PSC provides an accurate measure of psychosocial impairment, with the total score accurately gauging the extent of both internalizing and externalizing disorders. For closed cases where services were completed, YPI analyzed the changes in the mental health status of MOST-TACT clients by analyzing the change in pre- and post-service Y-PSC scores. For the 44 clients in Group I, the average total score at intake, a composite measure of externalizing and internalizing mental health issues, was 30.5. This is significantly above the score at which mental health services are indicated (i.e. 25). At discharge, the average score for the closed and completed cases in Group I was 23.1, indicating that clients overall experienced a 24% improvement in their mental health status and, on average, no longer required mental health services.

For the 44 closed and completed cases in Group II the average total Y-PSC score at intake was 22.8, indicating that *there has been a substantial decline over time in the mental health service needs of the clients.* Given the small number of closed and completed cases in Group II, this shift cannot yet be characterized as statistically significant or a trend. This change does signal the need for project managers to explore whether the teachers and student support staff have begun to change the reasons or criteria for making referrals. At discharge, the average Y-PSC score for the closed and completed cases in Group II was 20.2, representing an 11% improvement upon discharge. In sum, an analysis of the pre- and post-service Y-PSC scores indicates a decline in level of improvement from Group I to II. That decline, however, is largely a function of a decrease over time in mental health service needs of the participants. Overall, since MOST-TACT began offering services in January 2006, the average score at intake has been 26.9. At case closing, the average Y-PSC score has been 21.8, representing, for all closed and completed cases since the inception of the project, *an average improvement of 19% in Y-PSC scores as a result of the intervention.*

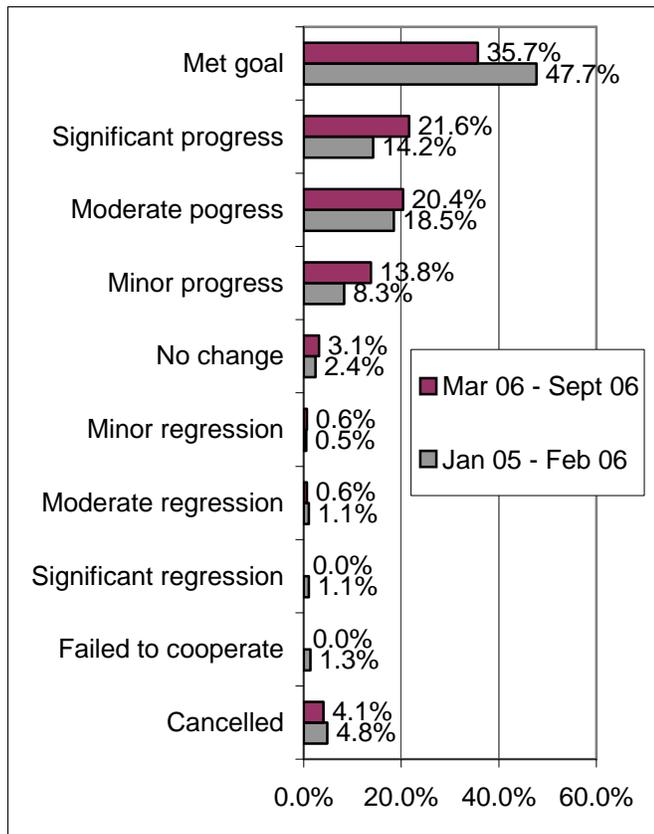
Personal Experience Screening Questionnaire (PESQ): A second, validated self-report screening instrument, PESQ, is used in the MOST-TACT project to gauge the propensity of an adolescent to use substances. For closed cases where services were completed, YPI analyzed the change in pre- and post-services PESQ scores. When the total PESQ “problem severity score” exceeds 30, it indicates a strong likelihood that an adolescent is engaged in substance use. In Group I, 15 MOST-TACT participants had an initial severity score of 30 or over. Of these participants, only 2 had post-service scores that exceeded the initial score, 5 had the same score, and 8 (53%) had lower scores. The mean decrease for this group was 2.1 with a standard deviation of 8.3. For Group II, the positive impact of the program was even more pronounced. Eleven MOST-TACT participants in this group had an initial severity score of 30 or over. Of these participants, only 3 had post-service scores that exceeded the initial score, none had the same score, and 8 (73%) had lower scores. *The mean decrease in PESQ scores for the more recent group of closed and completed cases was 2.6, 24% more than for Group I, with a standard deviation of 8.3.*

For both Groups I and II, there is an observable trend toward increasing PESQ scores from pre- to post-service administration for those individuals with initial PESQ scores below 30. Given the positive outcomes in substance abuse treatment goals and frequency of use reports to clinicians (discussed below), this PESQ finding may, in part, be a result of a limitation of the instrument. An analysis of CHARI data indicates that many clients using experimentally or at low levels initially minimize their reported use of drugs in the PESQ (as compared verbal self-reports to clinicians once a therapeutic relationship is established). This dissonance is explained by the therapists as the result of two factors: an initial disinclination by adolescents to admit substance use, particularly low levels, in writing; and a correlation between candor on the PESQ and the development of a clinical relationship.

Client-reported data on frequency of substance use: To gauge the impact of MOST-TACT services on the frequency of substance use, YPI analyzed client reports to clinicians on the frequency of substance use for closed and completed cases. In both Groups I and II, clients rarely reported using substances other than alcohol and marijuana. For the closed and completed MOST-TACT cases, the intervention is indicating a greater efficacy of the intervention over time. *The percentage of clients reporting a cessation of drinking increased substantially from Group I to II, rising from 21% to 35% of participants; the percentage of clients indicating a reduced intake of alcohol also increased, rising from 24% of Group I participants to 30% of Group II participants. In Group I, approximately one-half of the closed and completed cases experienced no change (29%), or were using alcohol more frequently (21%); in Group II, 29% experienced no change and only 7% increased alcohol use. The results were very similar for marijuana. For closed and completed cases, the percentage of those clients reporting cessation in the use of marijuana more than doubled, from 18% in Group I to 38% in Group II; 32% of Group I indicated a reduced intake of marijuana, compared to 23% in Group II.*

Progress toward meeting treatment goals: As indicated in **Figure 2** below, for closed cases where services were completed, clinicians reported that *a majority of clients either met, or made significant progress toward meeting, over one half of their treatment goals* (61.9% of Group I goals and 57.3% of Group II goals). These goals are in the domains of alcohol and other substance use, education, mental health, family, employment legal, and ‘other’. In 26.8% of Group I goals, clients were deemed to have made minor to moderate progress by the time services were completed; in Group II, this occurred in 34.2% of the goals.

Figure 2: Clinician Evaluation of Treatment Goals at Case Closing
(N = 687 goals in 88 closed and completed cases)



Regarding substance use treatment goals for closed and completed cases, clinicians are reporting greater levels of progress being made over time. Clinicians reported that 70.4% of the Group I substance use goals were met or were substantially met (“significant progress”); in Group II, 80% of substance abuse goals were met or substantially met. In other treatment domains, there was no significant difference in levels of progress between the two Groups, with a majority of treatment goals being met or substantially met.

IV. Patterns of Outcomes.

A strong indication of the maturity of a program is the extent to which its impact varies according to demographic or contextual variables. To gauge this aspect of MOST-TACT, YPI examined the variability of outcomes for a

variety of independent variables. The outcomes are measured by changes in the pre- and post-service scores of the PESQ and Y-PSC. YPI found no significant variation in outcomes by school, indicating that project clinicians are able to provide the service effectively regardless of the different levels of support by and enthusiasm for the program in schools (a p-value of 0.274 for PESQ outcomes and 0.259 for Y-PSC outcomes). Similarly, there is no significant variation according to the identity of clinician, indicating that the program design and implementation is sufficient to address any differences that may exist in clinician skills and experience (a p-value of 0.740 for PESQ outcomes and 0.382 for Y-PSC outcomes). There is a variation in outcomes by age of the client, but it is a modest one (Pearson correlation of 0.277). In general, the impact of MOST-TACT is lower for older student participants. There is also a difference in outcome by gender, but only in the area of mental health. Regarding mental health outcomes, females demonstrated a more positive response to the program, with an average decrease of 7.56 in Y-PSC scores, while males had an average decrease of 2.39 (a significant p-value of 0.024). There was no significant variation by gender in substance use outcomes, as measured by the PESQ (p-value of .940).

Since MOST-TACT began providing services in January 2005, 88 cases were closed and completed. In another 39 cases, services were initiated but before they could be completed, the client and/or the caregivers decided to discontinue participation, even though they were still eligible for the program. It is valuable for project implementers to consider the variables influencing the decision to leave the program before it can have its full impact. YPI review of the data indicates that a client’s age is a determinative factor. Those who discontinued the program had an average age of 16.4 years, compared to an average age of 15.3 for those who completed MOST-TACT services ($p < .001$). The decision to complete or abandon services was not influenced by the identity of the clinician (p-value of > 0.978) or client’s gender (chi-square p-value of 0.225). In other words, it

may be a valuable investment of time for MOST-TACT implementers and supervisors to develop age-specific program involvement strategies for older adolescents.

V. Conclusion.

MOST-TACT has continued to achieve impressive results throughout its first two years. It has consistently identified an eligible client population with complex service needs that is likely to benefit from the intervention. Despite turnover of project clinicians, the implementation has been achieved with high levels of fidelity to the program model in all significant areas: screening, assessment, therapeutic intervention, service planning, and monitoring. The program outcomes continue to be highly positive across multiple measures, and, as the program matures, MOST-TACT is proving to be increasingly effective in reducing substance use.

Going forward, the program staff will need to explore certain areas to ensure continued efficacy of the program. Referral rates from the schools have tended to ebb since March 2006, an issue that can be addressed through renewed efforts to raise awareness of the program on the part of student support staff and teachers. This is, however, a minor problem when compared to the outstanding successes of the program to date.

For further information about this edition of the MOST Reporter or about the evaluation of the Cayuga County MOST-TACT, please contact:

Youth Policy Institute, Inc.
(315) 824-0530

