Targeted Capacity Expansion Grant - Project End Report

Foundations Associates:
Transitional Living Services for Consumers with Co-Occurring Mental Illness and Substance Abuse Disorders

Contract Information

DATES OF SERVICE: October 1, 1998 through September 30, 2001

GRANTEE FEDERAL IDENTIFICATION NUMBER: 5 H79 TI11571-03 (B&D ID #010)

PROJECT NAME: Expanded Capacity of a Transitional Living Facility

PRINCIPAL INVESTIGATOR: Pam Sylakowski

EVALUATOR: Thomas W. Doub, Ph.D.

PROJECT LOCATION: Foundations Associates; Nashville, Tennessee
Michael Cartwright, Executive Director

Project Purpose

The intent of the project, funded by SAMHSA’s Center for Substance Abuse Treatment (CSAT), was to evaluate primary and secondary outcomes of a treatment model offering an integrated continuum of care for consumers with co-occurring mental health and substance abuse diagnoses. The project would assess efficacy in primary outcome domains of substance abuse, mental illness, and cost effectiveness, using multiple sources of information to assess each domain. A complete instrumentation package was to be administered 3 times to each evaluation participant to allow detailed estimates of change over time, including the trajectory of change. The project applied multiple sources of information for use in statistical modeling to minimize measurement error and used a longitudinal design for monitoring change. Data collection was to occur at three points for each consumer participating in the project (baseline, six months, and 12 months), with 144 targeted participants expected to participate over the three year period.
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**Background/Project Implementation**

Foundations Associates, the project site, was founded in 1995 as an integrated program for providing treatment of co-occurring mental health and substance related disorders. While the key programmatic concepts were already underway at this site, the hybrid nature of the project resulted in barriers in sustaining services within the current treatment system; a system that embraced single state agency, single-diagnosis models of care. At the time of the grant award, the existing Foundations’ program was operational with one 8-bed facility, and there were no public sector funding mechanisms for an integrated residential service model. The project would allow for the agency to develop female services and to expand the continuum of care to more closely align with those defined through the American Society of Addiction Medicine Patient Placement Criteria, Second Version (ASAM-PPC-II).

The project was originally slated to begin September 30, 1998. Delays in budget approvals (i.e., State authority’s inability to authorize project implementation until formal CSAT budget approval) slightly delayed implementation, shifting the start date to January 01, 1999. Additional implementation barriers related largely to securing a “fit” within the existing system, legitimizing the need for dual diagnosis services within both the provider and payer mix and educating the local community about differences in an integrated versus sequential or parallel service model. An example of such a barrier occurred early in the implementation phase, when State licensure requirements stymied the project’s ability to fill available beds. The Division of Mental Health (DMH) initially declined licensure due to the substance dependency component and deferred Foundations’ management to the Bureau of Alcohol and Drugs. The Alcohol and Drug division, while less concerned than the DMH division about the dual status of the population, required commercial zoning for licensure. Because the transitional living facility was residentially based, Foundations was instructed to return to DMH to acquire licensure status. While licensure was ultimately attained through DMH, it occurred approximately one year after efforts were initiated and involved significant education and lobbying. Fortunately, those efforts began prior to the successful award of this project. It is notable that there are still no existing dual diagnosis licensure bodies in the state.
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A summary of key events occurring during the initial 6 months of implementation follows:

**Domain** | **Activities**
---|---
**STAFFING** | • Positions of Men’s Housing Coordinator, Women’s Housing Coordinator, Van Driver, Psychologist, Clinical Director, and Researcher were hired.  
• The structure changed from live-in to 12 hour shifted care at residential settings, made possible by the award of a community-based crisis stabilization contract.
**FACILITIES** | • Foundations was awarded a duplex by MDHA, via $1 purchase, providing a 6 unit facility.  
• An 8 bed female TL unit and 5-bed step up unit were secured (13 total beds created for women; 5 additional beds obtained for men).  
• Service units expanded to 32.
**ADMINISTRATIVE** | • The first female was admitted to services February 01, 1999.  
• A consultant arrangement was established to complete a process evaluation of organizational and staffing issues.  
• The advisory committee handbook was developed and the 14-member Committee was organized (comprised of key stakeholders and funders). The first meeting was held February 26, 1999.
**TREATMENT** | • A residential handbook and privilege system was developed and based upon available literature, which was limited at that time, and practice wisdom gained through providing integrated services.  
• 12-step and therapy groups were initiated in residential settings.  
• A recreational program was developed and implemented.
**EVALUATION** | • The evaluation design and instruments were finalized.  
• The databases were finalized, final sources were selected, outcome and measurement instruments were selected, client study forms were designed, and analyses began on Foundations’ services for a baseline perspective on stages of treatment, relapse, and recovery.  
• Collection of data began February 21, 1999. Data collection was integrated with intake process and predominantly focused on quantitative outcomes, with shift projected to include structured and semi-structured contracts with staff and consumers to obtain qualitative data.
**MARKETING** | • Outreach meetings with community agencies were implemented to introduce admission
In May 1999, Foundations requested additional funds totaling $49,780 for each of the two remaining contract years, to augment evaluation and programming budgets. Evaluation funds were to be used to hire a part-time interviewer and to pay consumers for participation in follow up evaluations. Programmatic funds were requested to cover various supplies and equipment and a portion of both the clinical director and psychologist’s hours. These funds were approved.

Community awareness of the project was building and, during the third and fourth quarter, admissions maximized. During the third quarter, what would be the highest rate of drop out occurred due to staff turnover with 10 of the 26 admitted consumers withdrawing from services. With the growth in staff size and the complexity of services, significant emphasis was placed on staff training and defining and standardizing the approach to integrated services. This included intensive training on motivational enhancement techniques, DiClemente’s stage-wise approach to defining readiness to change, psychopharmacologic treatments, and other “cross-training” topics. The 2nd six month timeframe led to the following additional activities:

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<th>Domain</th>
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<td><strong>STAFFING</strong></td>
<td>• Hired Men’s Housing Coordinator and Facility Supervisor position was a new position identified because of demands associated with the rapid expansion and a need for centralizing supervision over the various physical settings.</td>
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<tr>
<td><strong>FACILITIES</strong></td>
<td>• Occupancy was consistently maintained at 95%.</td>
</tr>
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</table>
| **ADMINISTRATIVE** | • The intake process was streamlined in response to the process evaluation.  
  • Birch & Davis site visit was completed. |
| **TREATMENT** | • Aftercare services for project graduates were developed and implemented.  
  • A structured protocol was implemented for clinical staffing meetings to increase consistency of clinical decision-making.  
  • Initial policies and procedures were drafted and CARF application information was obtained.  
  • Transitional Living forms were developed.  
  • Emergency coverage was enhanced. |
| **EVALUATION** | • The electronic version of the ASI was implemented and staff training on its application occurred.  
  • Delays in 6-month follow-ups occurred due to difficulties locating consumers. Approval of
the year 2 and 3 funding enhancements permitted employment of a part time dedicated
interviewer as well as incentive funds to pay subjects for participation.

- Difficulties occurred identifying cluster match. Proposed formation of co-occurrence
  cluster.
- Per CSAT recommendations, conferred with Margaret Cramer regarding treatment issues
  related to women.

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<td>MARKETING/</td>
<td>• Community based agencies for ancillary and outreach services were actively being used.</td>
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<tr>
<td>SUSTAINABILITY</td>
<td>• Diversification planning efforts were initiated.</td>
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<td>• Implemented plans to conduct outreach with minority populations (conducted agency self</td>
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<td>assessment and sponsored youth sports league).</td>
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<td>• Foundations was denied provision of a Medicare number by Tennessee’s fiscal</td>
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<td>intermediary based upon a technical requirement that, in Tennessee, prevented any new</td>
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<td>assignments of Medicare numbers for partial hospitalization services.</td>
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<td></td>
<td>• Applied to be a contract agency through MAPS program within the Department of Health,</td>
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<td>Bureau of Alcohol and Drug Abuse Services.</td>
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Admitted consumers were comprised of 50% male, 19% African American, 73% Caucasian, 8%
other, with an average age of 35.7 and an age range of 20-59. Sixty-nine percent reported alcohol
use within 30 days of admission (54% to intoxication), 62% reported use of illegal drugs 30 days
prior to admission, with other drugs 30 days prior to admission identified as cocaine/crack
(46%), marijuana/hashish (35%), and benzodiazepines (19%). Prior housing and living
conditions were described as stable during the 30 day period prior to admission by 62% of the
consumer population, while 27% were institutionalized during that timeframe and 12% were
formerly residing in shelters. Substance use/abuse was noted as extremely stressful by 81%,
while 65% reported substance use forced forfeiture of important activities.
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Operational Phase – Year Two

By year two, the program was fully operational and consumers were being waitlisted as the volume of referrals continued to grow. The need to emphasize energies on two key areas was emerging:

- In order to ensure services remained fully “integrated,” cross training of professional and non-professional staff required ongoing emphasis.

- While the community was accepting of a grant program to treat what was considered a “difficult to treat” population, community insights regarding integrated care, dual diagnosis, or the value of funding, had not yet begun to surface.

With regard to the former, TCE funding permitted staffing expansion to include multi-disciplinary clinical staff such as psychiatrists, psychologists, clinical social workers, and alcohol and drug abuse counselors; however, philosophical perspectives of treatment among clinicians varied extensively. Philosophical training perspectives and biases in treatment approaches had to be addressed in a manner that extracted strengths-based and client-centered elements from both realms of treatment. Cross-training of mental health professionals consisted of education in 12-step philosophies, disease concepts, relapse prevention, and abstinence. Traditional alcohol and drug professionals required education emphasizing psychotropic medications and their purposes and side effects, empathic understanding and listening skills, and harm reduction theories. All staff members were and continue to be educated on motivational enhancement techniques. It was immediately clear that, before different disciplines can address dual treatment, identification of differing philosophical perspectives and ongoing training, education, and experience were requisite to developing competencies.

At the same time, while evolving literature clearly supported the construct of integration practices, available literature was construct- and theory-based and failed to offer specific operational integration techniques. Therefore, effort were directed at developing and defining operational practices that could be replicated as integrated approaches to treatment as part of the
CSAT model program. One of the key insights discerned through this project was the realization that philosophical tenets typical of traditional service programs can be greatly incongruent with the mission of an integrated program. Agency efforts, therefore, must continuously strive to develop a new culture that reinforces the strengths of multiple disciplines and encourages “out of the box” treatment paradigms. Non-confrontational, motivational treatment using harm reduction, methods for theory integration, aspects of psychopharmacology, and Dual Recovery Anonymous were addressed weekly in staff training.

Regarding the latter issue of sustainability, it was immediately clear that consciousness-raising efforts were critical to engaging community support for integrated services. While private sector funding sources have increasingly been amenable to creative solutions and respond to long-range efficacy data, public sector systems are typically slower in their acceptance of modified delivery systems. Ongoing community education and marketing endeavors were targeted at broadening community awareness of the impact of co-morbidity and the importance of defining funding streams amenable to supporting integrated treatment. Foundations Associates, through its Dual Diagnosis Recovery Network, launched a media campaign consisting of statewide and local conferences, publication of a newsletter on co-occurrence, and development of an anti-stigma media packet. By the conclusion of year two, several private contracts had been secured, however, State Medicaid officials had not expressed willingness to provide reimbursement for integrated residential treatment. Sustainability was the most impenetrable challenge and, despite federal funding through the Substance Abuse Mental Health Service Administration (SAMHSA) for treating dual disorders, grant funding streams for individual states remained separate and divided. Although Tennessee’s substance abuse and mental health block grant dollars were blended through a Medicaid waiver, the state continued to struggle with methods for blending funds for mental health and substance abuse services.

Key activities occurring during the second year of operations were as follows:

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<td>• A new Clinical Director was hired, along with a full-time accountant.</td>
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<td>• The intake process was centralized and the Women’s Housing Coordinator transferred to that position. A new Women’s Housing Coordinator was hired.</td>
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<td>• Foundations was approached by two universities to offer intern placement services focusing on integrated treatment.</td>
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<td>• A Hispanic psychologist was hired.</td>
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<td>• A Resident Counselor position was upgraded at each of the intensive residential locations to provide Associate Housing Coordinator responsibilities. This position would support</td>
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responsibilities of the Housing Coordinator by supervising milieu activities, conducting inspections, and coordinating resident counselor schedules.

- A psychiatric nurse practitioner and dual diagnosis specialist was hired to provide individual therapy and psychopharmacologic treatment.
- Two staff members sat for LADAC licensure examinations.

**Facilities**

- An additional step up housing facility was obtained (originally owned by DC Development

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<td>and Housing Authority and sold to FA for $10.</td>
<td>Quarterly housing management inspections were implemented.</td>
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<tr>
<td>Administrative</td>
<td>The consultant developed a computerized tracking system to monitor client flow. That process was implemented.</td>
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<tr>
<td>Treatment</td>
<td>The Dual Recovery Anonymous (DRA) 12 step group was implemented.</td>
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<td>The weekly staff meeting format was augmented to include a weekly in-service rotation presented by each staff member on issues related to integrated treatment.</td>
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<td>Staff training was emphasized in the areas of Gorski’s relapse models, ASAM PPC-II, ethics, motivational enhancement, and cultural competency.</td>
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<td>Monthly staff meetings and training for residential counselor staff were implemented.</td>
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<td>The consumer handbook was modified to include a more restrictive admission status, Entry Level, and a higher privilege status, Level 5.</td>
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<td>Processes were evaluated to enhance consumer empowerment in the program structure via implementation of a consumer rules committee.</td>
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<td>Discharge outreach and follow up processes were implemented to ensure discharged consumers accessed outreach services and to assist with reintegration.</td>
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<td>Residential services were enhanced to include Family and Sponsor weekends, Community gardens, medication education programs, on-site recovery libraries, skills training programs, and a consumer led educational curriculum.</td>
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<td>Annual procedural modifications included addition of a bio-psycho-social evaluation component to augment testing protocols and modification to the relapse policy to enhance consumer involvement in evaluating decisions for consumers who relapse in treatment.</td>
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<td>A dedicated case manager was assigned to work with Foundations’ consumers from a local case management agency.</td>
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**Evaluation**

- The rate of study participation was nearly 100%, while admissions during one quarter were slightly below projected numbers served due to difficulty finding discharge locations. The goal for baseline interviews (some admissions repeat) was met for the total participants expected to be served in the original grant application. The goal was accomplished in 20 rather than 24 months, with 143 unique admissions and 1 refusal to participate.
• Follow up efforts were modified several times to develop strategies for enhancing participation rates. Initially, program staff were notified of upcoming follow up interviews and were responsible for ongoing phone contacts with consumers—follow up was enhanced to 50% within quarter one. During the second quarter, the phone based follow up was reevaluated due to instability in contact information, absence of phone services among consumers, etc. Evaluation staff shifted to grass roots contact with informal support systems, and follow up rates increased from 14% to 60%. By the end of the 3rd quarter, 71% follow up rate was attained for 6 months and 70% at 12 months. By the conclusion of the 4th quarter, 74% evaluation follow up was attained at 6 months and 73% at 12 months. Employment of a part time assessment counselor with strong community ties to perform

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Domain Activities

• A process of clinical records abstraction was implemented with the objective of documenting qualitative clinical characteristics and course of treatment.

• The plan to supplement evaluation with archival data continued to experience barriers due to data storage in different organizations, each requiring significant administrative and personnel support. The evaluator met with the Behavioral Health Organization, AdvoCare, to obtain archival databases for outcome analyses in homes of generating a matched control group for comparative analyses of cost and service use. Continued evaluation challenges include implementation of cost analyses. The evaluator identified a process for accessing archival databases for external measures of service utilization with treatment costs and internal processes identified by the accountant. The evaluator was able to acquire access to part of the state Medicaid dataset to permit extraction of information relevant to service history and program impact, to provide an independent verification of consumer self report and a specific measure of program impact on public sector costs

• Ideas were presented by the program evaluator at National CSAT-TCE/HIV Grantee meeting regarding formation of cluster activity devoted to co-occurrence.

• Foundations hosted the Co-occurrence cluster meeting with sponsorship by CSAT and Birch & Davis.

• The evaluator remained active in cluster activities with both the women’s cluster and the co-occurring and other functional disorders (COFD) clusters; working with COFD cluster, Birch & Davis, and CSAT to develop a survey to collect information regarding prevalence of co-occurring disorders within the population receiving services funded by TCE.

• The evaluator developed a marketing packet for the COFD cluster intended for distribution to incoming TCE grantees and completed an analyses and draft summary of a TCE cross-site survey developed by the COFD cluster group.

• The evaluator presented preliminary study outcomes at the National Mental Health Statistics Improvement Program (MHSIP) Conference in Washington, DC and presented on evaluation design and preliminary study outcomes at the regional meeting of the Southeastern State’s MHSIP User’s Group.

MARKETING/ SUSTAINABILITY

• A marketing and business plan, agency brochure, and conference booth were developed. Community agencies and public and private funding sources were actively contacted, and the brochure was forwarded to clinical professionals across the state. Aggressive efforts were expended to develop third party contracts with public and private sector agencies, including attendance and presentations at national conferences.

• As service levels were consistent with ASAM PPC-II service categories, that consistency was being used to market services to payers.
• A contract was obtained with Magellan Behavioral Health for private sector admissions.
• A 3-day regional conference on Violence, Trauma, and Abuse was sponsored by Foundations.
• Foundations sponsored the 7th Annual Southeast Conference on Co-Occurring Mental Health and Substance Related disorders with over 400 participants in attendance. Representation included national experts such as H. Wesley Clark, Scott Miller, Mark Gold, David Mee-Lee, Kenneth Minkoff, Janis Gabe, Coleen Clark, Reverend Edwin Saunders, Dr. Author Cox, and Tim Hamilton.
• The first two Dual Network Newsletters were published.

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<td>Foundations was selected as one of 3 exemplary co-occurring programs to present at the Co-occurring Institute during the State System Development Program (SSDP) Conference in Orlando.</td>
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<td>Foundations was nominated for the American Psychiatric Association’s Gold Award.</td>
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<td>A Foundations’ consumer was awarded the Hampton Perry award for consumer advocacy in the southeast region.</td>
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<td>Foundations was awarded the Eli Lilly Reintegration Housing Award for successfully transitioning consumers with schizophrenia into the community.</td>
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<td>A TCE grant was submitted for expansion of outpatient services.</td>
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<td>A Memorial Foundation grant was submitted to expand evening and weekend therapy services.</td>
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Of the population served during year two, alcohol, cocaine/crack, and marijuana were the most frequent substances used. Predominant diagnoses consisted of bipolar disorder with psychotic features, and major depression with psychotic features. More than of admitted consumers were also diagnosed with a personality disorder. The ethnicity of the consumer base was consistent with the ethnic breakdown in Nashville. Consumers reported a higher proportion of medical problems than clients in normative substance abuse programs, with employment problems comparable to other public facilities though substantially in excess of most private facilities. In addition, consumers reported comparatively more legal problems than clients from average treatment programs and more family and social programs. Consumer profiles reflected substantially more psychiatric impairment than with typical substance abuse treatment programs.

Operational Phase – Year Three

The third year of services focused on and aggressively addressing sustainability. It was clear that community education activities were resulting in increasing recognition of the complexities of dual diagnosis on both the local and national levels. Preliminary outcome data was suggestive of strong positive long range outcomes for program participants, and both local and national
attention was increasingly focused both on co-occurrence as an important societal issue and Foundations as a promising model of treatment. As such, public sector payers were more responsive to entertaining discussions related to funding and, one month before the conclusion of the TCE grant, a variety of services were funded to Foundations Associates to permit sustainable and expanded programming. These are described below, along with other key tasks that occurred during that period.

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**Domain**

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<td>• Two staff members completed and passed the LADAC written licensure examination.</td>
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<td>• A new Men’s Housing Coordinator was hired.</td>
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<tr>
<td>• A family education specialist was hired as a result of the Memorial Foundation award.</td>
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<td>• Evening therapy services provided by the psychologist were reevaluated. Consumers were missing participation in milieu and 12-step groups as a result of evening sessions and, because the psychologist was unable to accommodate therapy needs during business hours, a part-time therapist was engaged to provide that service.</td>
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<td>• As a result of a large expansion award that would permit 8 additional female step down units and a 24-unit replication project in Memphis, Tennessee, additional staff were hired. All Foundations’ Memphis staff attended a weeklong training program at the Nashville program.</td>
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<td>• A Master level occupational therapist was added as a non-grant funded position to perform skills training for consumers in preparation for discharge or transition to step down or independent living services. The position was designed to focus on community resources, vocational assessments and training, use of public transportation and related community based educational needs.</td>
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<td>• A Crisis Response Screening Coordinator, also a non-grant funded position, was hired to triage admission calls, maintain census information, schedule intakes, and follow up with consumers who failed to show for intake appointments. The position was filled by a program graduate.</td>
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**Facilities**

- The 24-unit Memphis expansion award led to purchase and renovation of three residential facilities and one drop in center.
- The 8-Unit Nashville expansion led to purchase of a multi-unit facility that would be used for female step-up and independent living.

**Administrative**

- Foundations successfully passed the Tennessee Department of Finance and Administration audit of grant services.
- Foundations successfully passed TennCare, Magellan, and AdvoCare audits of both residential and outpatient services.
- The initial phase of the IS needs assessment was completed.
- Foundations was invited for membership on a local Master level School of Social Work Advisory Board for student interns.

**TREATMENT**

- The consumer handbook was revised to identify stages for each progressive level of program privilege, along with expectations and assignments for sponsors. Actions were more specifically detailed regarding privilege loss through relapse or program infractions, and community involvement in determining those actions was expanded. The revised privilege system included a combination of clinical progress, insight with recovery, and success with progressive responsibilities. Modifications were implemented to further enhance the culture of recovery within the residential community.

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<tr>
<td>• Residential services were expanded to include regular participation in Confidence Ropes Courses. In-house Tuberculosis tests were implemented, central office space was expanded, and evening residential therapy sessions and gender in recovery groups were added to the milieu.</td>
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<tr>
<td>• Crisis stabilization residents were physically moved to separate residences from the intensive residential consumers. This physical separation increased flexibility and mobility in services.</td>
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<td>• The Master level Occupational Therapist developed and implemented a skills training education program to transition consumers from intensive residential to step-down, independent living, and community placements. For consumers who remained in the Foundations continuum of care, intensive ongoing training was provided in use of community services, maintaining a household, developing and adhering to budgets, job search, and related community skills.</td>
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<tr>
<td>• Foundations obtained a contract with the State’s Behavioral Health Organization to provide supportive living services for dually diagnosed consumers meeting criteria as high utilized inpatient psychiatric services. Under this contract, consumers remained in the program longer due to a higher acuity consumer base. Admissions were slightly below normative during the latter portion of the year due to this modification.</td>
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<tr>
<td>• Policies and procedures to reflect requirements of CARF, licensure, TennCare, and AdvoCare were completed, and weekly staff training began to implement process and protocol modifications. Key changes included formalized protocols for managing residential services, modifications to progress note formats to ensure requisite elements were addressed, modifications to master treatment plan protocols, development of upward reporting protocols and processes, implementation of tracking procedures, review and revision to all agency position descriptions, implementation of various agency committees to monitor quality and credentialing programs, and modification to all agency operational procedures.</td>
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<tr>
<td>• In addition to weekly staff in-services, staff training included: presentations by Dr. Thomas Riordon, an addictionologist who presented on psychopharmacology of mood disorders and treatment during A/D relapse; Dr. Kitty Myatt, a psychologist who specializes in applying motivational interviewing techniques; Cardwell C. Nuckols, a specialist on integrated treatment; training on consumer pharmacologic education strategies, cultural competencies, integrated treatment, and case management; non-violent CPI interventions by a Foundations’ employee who was certified through a Train the Trainer process; and attendance at Foundations’ sponsored workshops and conferences.</td>
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**EVALUATION**

- By the conclusion of the project, baseline interviews amounted to 211, well exceeding the
144 proposed participants.

- During the first quarter, follow up were at 72% for 6-month interviews and 80% for 12-month interviews; of the participants out of the program for at least 12 months, 86% had provided either 6 or 12-month data. During the second quarter, 74% of 6-month and 76% of 12-month follow-ups were completed; 87% had provided either 6 or 12-month data. By the third quarter, 72.4% of 6 month follow ups and 96% of 12 month follow ups had been completed; with 86% complete on individuals eligible for 6 or 12 month follow up. The cumulative participation rates with at least one follow up were considered critical, because of intentions to apply advanced longitudinal modeling techniques (HLM and latent growth curve models) in analyses. HLM does not require data to be present at all time points and allows for variability in timing of data collection.

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<td>Preliminary outcome psychometric analyses of ASI, BIS, PAI, SCZ assessment tools showed substantial program effects after 6 months and continued stability after 12 months.</td>
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<td></td>
<td>The evaluator continued to collect data for the women’s cluster, despite initial technical difficulties extracting women’s cluster data from the Birch &amp; David MS Access Data Entry Template. A summary of evaluation questions and draft methodology were developed and distributed to all members of the COFD cluster, and the evaluator participated in COFD cluster meeting in Dallas. COFD cluster finalized evaluation questions and cross-site cluster assessment tools were drafted. Evaluator is conducting exploratory analyses on cross site data for COFD cluster group. Women’s Cluster products and process were reviewed, evaluation activities were discussed and updated, and grantees received refresher course on ASAM assessment methodology.</td>
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<td>The evaluator presented project findings at annual NASMHPD Research Institute in Washington, DC.</td>
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<td>The evaluator completed his doctoral dissertation using data generated by the project to conduct analyses of psychometric properties of the ASI.</td>
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<td>The evaluator and Executive Director were invited to host a 3-hour workshop on methodologies for attaining high follow up rates at the CSAT Evaluators’ meeting. This project was one of five grantees invited to host.</td>
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<td>The evaluator invited to facilitate 2 workgroups sessions at the National Conference on Substance Abuse and Co-existing Disabilities in Baltimore – expanding access to treatment and developing new research to address questions related to substance abuse treatment for persons with co-existing disabilities.</td>
</tr>
</tbody>
</table>

Marketing/ Sustainability

- A Foundations intake staff member was out-stationed at a local case management agency once weekly with the objective of educating agency staff about co-occurrence and participating as part of the clinical staffing process. This effort lasted approximately 3 months and was eventually discontinued with limited interest expressed by the case management agency.
- The Dual Network, which began as a newsletter format, was modified to a journal format. A call for articles was issued throughout the country to specialists in co-occurrence and integrated treatment. The journal was issued nationally as part of a campaign to increase awareness of co-occurrence, and articles were submitted by experts in the field including Kenneth Minkoff, Cardwell C. Nuckles, Norman Hoffman, and others.
- Public and private sector marketing efforts continued throughout the year. During the first two quarters, a proposal and presentation was provided to the CEO of the Behavioral
Health Organization reviewing preliminary project outcomes and requesting reimbursement for integrated services through the residential continuum. Foundations were instructed to obtain letters of community support, which were provided immediately following that meeting.

- Foundations approached two local governmental agencies, the Department of Health and the Davidson County Community Corrections Drug Court Program, to evaluate synergies for collaborative grant submissions. As a result of those meetings, a joint proposal with the Davidson County Community Corrections was submitted to provide a “dual diagnosis court” and residential treatment services for nonviolent felony offenders, and a proposal was submitted with the Department of Health to expand the continuum of outpatient services for consumers with co-occurring conditions.

- Foundations approached the Department of Mental Health and Developmental Disabilities

### Targeted Capacity Expansion Grant - Project End Report

<table>
<thead>
<tr>
<th>Domain</th>
<th>Activities</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>to discuss the potential for a collaborative grant submission under the HCFA Real Choice grant. As a result, a submission to develop a database on housing opportunities and education to stakeholders on housing options was submitted.</td>
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<td>Foundations assisted local providers in preparing white papers in response to anticipated funding changes proposed by the Behavioral Health Organization.</td>
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<td>Foundations submitted a TCE grant to develop a dual diagnosis Assertive Community Treatment team for homeless individuals with co-occurring conditions.</td>
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<td>Foundations submitted an Addictions Transfer Technology and National Center of Excellence on Co-occurring Disorders grant.</td>
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<td>Foundations submitted a grant to augment conference funding.</td>
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<td>Foundations was awarded the TDMHDD/HUD grant funds to expand residential services by eight female units in Nashville, replicate the program with twenty-four units in Memphis, and manage a drop-in center. For one of the Memphis facilities, community opposition to residentially based dual diagnosis services impacted implementation timelines. Licensure issues consistent with those experienced in the initial program’s licensure have also affected implementation and, at this writing, are being addressed.</td>
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<td>Foundations was awarded a Memorial Foundations grant to support employment of weekend/evening therapist.</td>
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<td>Foundations was contacted by Dr. Shel Weinberg requesting submission of agency information for incorporation in the pending SAMHSA CSAT co-occurrence TIP. Identified as one of two agencies in the country that will be featured in the TIP, an anthology of implementation efforts, lessons learned, and preliminary outcomes was submitted.</td>
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<td>Foundations was contacted by NASMHPD requesting agency information for consideration of model program status. NASMHPD conducted an onsite visit of the outpatient and residential treatment services, and Foundations was selected as a model co-occurring treatment program.</td>
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<td></td>
<td>Foundations’ Executive Director was awarded the Community Service Award by the Baha’I faith, the annual Advocacy Award by the Nashville chapter of NAMI, and the Provider of the Year Award by the Tennessee NAMI chapter. He was invited to present as the keynote for Lifelinks 3rd Annual Vocational Rehabilitation conference in New Mexico.</td>
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<td>Foundations hosted “Bridge Two Worlds Together: Two Worlds into One” conference in Las Vegas with over 600 in attendance. Speakers included H. Wesley Clark, Ken Minkoff, John Bradford, Kim Mueser, Janice Gabe, along with a presentation on project outcomes</td>
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</table>
Targeted Capacity Expansion Grant - Project End Report

To date:

- Foundations hosted the “Third Annual Tennessee Statewide Conference on Co-Occurring Disorders” in Memphis, Tennessee, with speakers including: Terrence Gorski, David Mee-Lee, Lewis Gallant, and the project evaluator, Tom Doub.

- Toward the middle of the year, funding for supportive living services were approved by TennCare for consumers with high inpatient utilization histories of 30 consecutive inpatient or 3 admissions within 12 months prior to admission; funding permitted treatment of high utilizer populations, but at-risk consumers and individuals meeting less restrictive guidelines were not funded through this contract. Due to the higher level of recidivism, consumers under this contract were required to participate in treatment for longer periods of time, hence affecting the volume of admissions during this period. However, implementation of the project, along with a successful audit of services under the State’s Supervised System of Care process, was a considerable success.

Targeted Capacity Expansion Grant - Project End Report

Domain | Activities
---|---

- Also toward the middle of the year, the collaborative contract with a local case management agency to provide crisis stabilization services was cancelled, in order that the contracting agency could provide those services internally.

- During the fourth quarter several sustainability successes occurred:

  - The Behavioral Health Organization agreed to both fund and expand the scope of crisis stabilization services. That project was implemented in under two weeks, and has maintained 90% capacity since it became operational. The project was audited through the AdvoCare Supervised System of Care and found to be wholly compliant.

  - Foundations’ collaborative TCE grant with the Tennessee Department of Health to provide expansion outpatient services was awarded.

  - Foundations’ collaborative TCE grant with the Davidson County Corrections Drug Court program to provide a dual diagnosis diversionary program for non-violent felony offenders was awarded.

  - Foundations’ collaborative HCFA grant with the TDMHDD to provide community education and a web-based repository of information on housing options, “Housing within Reach”, was awarded.

  - Foundations’ TCE grant to provide a dual diagnosis Assertive Community Treatment (DACT) team for homeless consumers with dual diagnoses was awarded.

  - Foundations presented an additional proposal to the Behavioral Health Organization for expansion of case management services, Level II services (step-down residential for consumers who need less intensive services than supported living), and expanded respite services. That proposal is currently being evaluated but appears highly promising.
Program Description

With the limitations in available literature regarding methodologies for integrating treating, significant effort was expended throughout the project to operationalize those strategies. In the following subsections, we identify assessment, treatment, and staffing elements we believe to be essential to successful treatment integration.

Assessment

One key aspect of Foundations’ assessment model is that primary assessment responsibility lies in the hands of a single clinician, as opposed to alternative models that distribute intake assessment responsibility across several staff. The consolidated approach serves to maintain a high level of consistency across assessments and ensures that intake assessments are conducted by a clinician experienced assessing both the severity of substance use and the extent and nature of co-morbid mental health conditions. The intake responsibility was centralized to one admissions counselor who would administer all core assessment materials used for clinical evaluation (and research), generate summary report requirements, and make appropriate referrals for other needed clinical assessments (e.g., psychiatrist, psychologist, or other specialists).

At program implementation, newly emerging integrated assessment protocols had not yet established reliability and validity for this population. As such, a group of assessments were selected with established reliability and validity in populations similar to that served by Foundations Associates, i.e., predominantly individuals with substance dependency conditions and serious mood or thought disorders. The complete protocol included elements of both clinician-report and self-report, in order to minimize the impact of biases on the part of the
clinician or the consumer. Accommodations were made as needed to the basic assessment package, depending on the presenting needs of the consumer and with particular sensitivity to diagnostic severity, reading level, special needs or disabilities, and cultural considerations. Non-standardized protocols were developed to achieve two ends:

- **Operationalize ASAM PPC-IIR measures to facilitate decision-making regarding placement.**
  This included application of the ASAM crosswalk and development of specific criteria that defined medical necessity standards for each level of the Foundations’ continuum of care, and;

**Targeted Capacity Expansion Grant - Project End Report**

- **Provide depth to the psychiatric portion of the evaluation to offer a platform for integrating treatment elements.** This included an in depth interview regarding the consumer’s family of origin, behavioral health and substance dependency treatment history, prior traumas, behavioral trends, psychiatric symptomatology, and psychopharmacologic treatment history.

Assessment components included:

1) **Prescreening** (completed by referring agency or administrative staff)
   - Brief Referral Form with succinct diagnostic and treatment history
   - Consumer completes Stages Of Change Readiness and Treatment Eagerness Scale (SOCRATES; Miller & Tonigan, 1996)

2) **Intake Assessment**
   - **Comprehensive Psychosocial Interview:** treatment history; multiaxial DSM-IV diagnostic assessment; mental status examination; assessment of contributing factors, including: social/family/peer concerns, legal, cultural, spiritual, vocational, housing, abuse, and other consumer-specific issues; information from collateral informants; Release of Information; eligibility for public assistance).
   
   - **Standardize assessment battery:** Addiction Severity Index (ASI), Brief Symptom Inventory (BSI), Personality Assessment Inventory (PAI) (Schizophrenia Subscale), Quality of Life Inventory (Customized Lehman’s QOLI), Empowerment Survey.

   - **American Society of Addiction Medicine (ASAM) PPC-IIR Multidimensional Assessment**
- Initial Treatment Planning Recommendations

3) Psychiatrist Assessment

- Psychiatric interview and review of previous assessment materials
- Diagnostic Impressions (multiaxial DSM-IV)
- Need for pharmacotherapy
- Assessment of acute intoxication/withdrawal risk
- Evaluation of comorbid medical conditions
- Review of Treatment Planning Recommendations

4) Psychologist or other Specialized Assessment (as needed)

- Objective or Projective Psychological Testing
- Laboratory Tests (Serum or Urine Toxicology)
- Vocational Assessment
- Nursing Assessment
- Case Management Assessment; need for collaborative services
- Referrals for additional assessment as needed

The assessment process was used to determine the consumer’s appropriateness for Foundations’ integrated residential program, key clinical problems, and individualized treatment strategies. If a consumer was deemed a poor match for Foundations’ residential program (due to a single diagnosis, poor fit with individual treatment needs, or recommendation for another level of care), the appropriate referral was expedited.

Staff training emphasized that assessment is frequently the first opportunity for an agency to effectively engage the consumer and begin a positive therapeutic relationship. Intake assessment personnel were encouraged to build immediate positive rapport with the consumer and, as a representative of the program, work toward an empathetic bond of trust and empathy. This is particularly important for programs serving consumers with co-occurring disorders, frequently veterans of treatment, as it reflects program sensitivity to consumer needs (and motivational status) and plants a seed of hope regarding future treatment efforts.

The intake assessment is only the first step in an ongoing assessment process, in which clinicians continually collect information about the consumer in order to tailor treatment more effectively...
to individual needs. It is understandably difficult to elicit a comprehensive diagnostic description and problem summary during a brief intake assessment session in which initial rapport must also be established. Ongoing assessment is particularly important for programs addressing co-occurring disorders, due to the inherent challenge of differential diagnosis of substance-induced versus mental health disorders. It is well known that commonly associated sequelae of substance use disorders (e.g., hallucinations, delusion, paranoia, etc.) can mimic symptoms of mental health disorders and vice versa. Given a common set of presenting symptomatology, a clinician can only make differential diagnoses based upon historical information regarding usage patterns and associated symptoms and after a period of abstinence from illicit substances. This is particularly important if the consumer presenting for treatment services has not had a recent period of significant abstinence. In his case, program staff must carefully monitor changes in

clinical status after program entry, to effectively distinguish effects of substance use versus mental health symptomatology. Therefore, emphasis was placed on collection of clinical information as part of the ongoing assessment process to be incorporated into individualized treatment plans, update treatment objectives, evaluate progress toward objectives, and continually assessing stepdown and discharge goals.

**Program Elements**

Individual therapy and case management plans were established at admission to evaluate the life domains of mental health, physical health, vocational/educational, financial, housing/life skills, spiritual, and recreational/social. Each individual was assigned a primary therapist to coordinate care planning. Service matching was determined through the assessment, and the individual was directed either to outpatient or residential services. Service elements are described below.

**Crisis Stabilization**

Admissions to crisis stabilization typically result in a 72-hour stay to stabilize psychiatric or substance abuse symptoms and/or medication adjustments for individual at acute risk for inpatient psychiatric care. The goal of this program is to provide interim crisis services until the individual is stabilized and the level of services can be reduced through structured residential and aggressive pharmacologic treatments. Once stabilization occurs, the consumer may be linked to community services or placement or, as appropriate, may be enrolled in Foundations’ continuum of services. Crisis services include 24-hour staff supervision, regular monitoring by a psychiatric nurse specialist, and ongoing psychiatrist evaluations with on-call 24-hour response by medical
and clinical staff. Although not initially intended solely to serve dually diagnosed consumers, in excess of 60% of consumers served through diversionary services are dually diagnosed. This program provides a natural trajectory in identifying high-risk populations with concurrent disorders and enrolling them in non-traditional integrated services. All remaining Foundations programs serve only dually diagnosed consumers, with the majority diagnosed with Axis I mood or thought disorders with comorbid substance dependency.

Dual Diagnosis Enhanced Therapeutic Community (DDETC)

The DDETC component is provided through eight-bed residentially based houses licensed by the Tennessee Department of Mental Health and Developmental Disabilities. Key program components include:

- **Length of stay**: Length of stay in the DDETC averages six weeks to three months depending upon level of symptomatology, usage history, and progress in treatment. As appropriate, again determined diagnostically and by individual presenting circumstances, the consumer may move through the Foundations’ housing continuum or into community-based treatment following completion of this phase of services. An earned system of privileges combines completion of treatment goals with effective step work and milieu accomplishments to define when and how progression occurs.

- **Staffing**: Staffing consists of 24-hour wake staff supervision by resident counselors, a majority of which are mentors in recovery and program graduates. In addition, a master level therapist is stationed onsite during business hours and a family therapist/educator is on-site each Sunday during visitation. The weekday therapist works closely with the consumer and his/her family through individual sessions, family therapy, and development of collaborative targeted goals for recovery. The weekend therapist conducts a monthly education program for the consumer’s support group to address the dynamics of dual recovery, the importance of medication, and develop individualized reintegration plans that enhance and emphasize both natural and formal supports. Families and support systems are encouraged to participate in NAMI support groups. Twenty-four hour crisis call availability occurs through both the Foundations Associates’ clinical staff and the regional mobile crisis response team. Through the group therapy/psychoeducation component, all consumers are evaluated and treated by a licensed psychiatrist for psychopharmacologic interventions. Non-confrontational, motivational interviewing techniques are required by all staff and are emphasized in orientation, trainings, and as a key focus of weekly clinical meetings.
Psychoeducation/Therapy: The psychoeducation/therapy program provides a five days per week, three hours per day intensive, integrated dual treatment program with three daily groups, each one hour in length, designed to provide psycho-education, addictions treatment, relapse prevention, therapy, and coping strategies. The foremost premise of psychoeducation/therapy is that all modules are structured to address the confluence of both disorders in a manner that educates and instills hope in recovery. The second premise, which is considered equally important in an integrated regimen, is the application of DiClemente’s stage-wise approach for defining treatment according to the individual’s readiness to change. Cognitive therapy and motivational interviewing are integrated with a twelve-step dual recovery intervention, where staff training focuses upon non-confrontational methods of directing change. Psychiatric evaluation, medication management, individual psychotherapy, and case management are also provided for all participants by a treatment team comprised of psychiatrists, psychologists, clinical social workers, and certified alcohol and drug counselors.

Peer Mentors: At admission all consumers are assigned a peer mentor. Peer mentors have successfully accomplished key personal recovery goals and are nearing the conclusion of the initial phase of treatment. The role of the mentor is to assist in orientation, acclimation, and to offer a hope-in-recovery perspective.

Community milieu elements: Shared responsibilities for the community is an expectation from the date of entry and throughout participation in the program. Residents conduct cooking, cleaning, and other routine chores with staff participation through modeling and teaching. The extent of staff assistance is based upon consumer need and staff members are expected to participate as a “member” when less educational assistance is needed. Peer mentors also act as primary teachers.

Peer Review Committee (PRC): While the model reinforces abstinence, the profile of the served population and the recognition of stages in recovery lends to an acknowledgement and acceptance that harm reduction elements must be incorporated. When relapse occurs for an active program enrollee and s/he desires to continue treatment, the consumer must complete a Relapse Self Evaluation. The Relapse Self Evaluation is a protocol that encourages introspective analyses of triggers, relapse planning, and an assessment of impact of the relapse on the individual, community, and support systems. The member presents his/her evaluation to the larger community and is rated by committee members according to both prior motivational and engagement characteristics and proposed relapse planning. The committee’s role is to determine whether the individual can remain in treatment or will
Targeted Capacity Expansion Grant - Project End Report

Peer Review Committee – Relapse Evaluation

Consumer: ____________________________ Date: ____________________________ Reviewing Team Member: ____________________________

1. Rate the quality of the resident’s investment/involvement in treatment since admission, with 5 being very committed/invested and 1 being not invested at all. 1 2 3 4 5

2. Rate the quality (likelihood of effectiveness) of the resident’s relapse/incident plan, with 5 being very well thought through and 1 representing a very poor plan or a plan that does not appear to be well considered. 1 2 3 4 5

3. Evaluate the individual’s remorse regarding recent events (relapse, rule violation, etc.), with 5 being very remorseful and 1 being not remorseful at all. 1 2 3 4 5

4. What level of pre-planning/forethought do you believe occurred regarding this relapse/incident, with 5 being very planned and 1 being not planned at all. 5 4 3 2 1

5. What level of ownership did the individual have regarding the relapse/incident, with 5 being an admission/self report that the relapse occurred and 1 being that the relapse was reported or discovered by someone else. 1 2 3 4 5

6. Rate the severity of the relapse/incident, with 5 being very severe and 1 being a “slip.” 5 4 3 2 1

7. If other violations to the treatment center’s rules occurred, rate the severity of the violations, with 5 being very severe and 1 being mildly severe or not severe at all. 5 4 3 2 1

8. Has a prior relapse/incident occurred while in this treatment facility? Yes ( ) No

9. What is the individual current treatment level? E 1 2 3 4 5

Circumstances/Comments:

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What are your recommendations?

- Discharge to other services
- Remain at Foundations

**Integrated schedule elements:** The residential model includes a combination of recovery and treatment therapies to provide diagnostic education, medication education and management, develop relapse plans, and encourage participation in 12-step models of intervention, particularly Dual Recovery Anonymous (DRA). All treatments address the interrelatedness of co-morbidity and, as with the outpatient model, a combination of psycho-educational modules occurs in conjunction with didactic therapies. Medication education groups and

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Medication supervision is an inherent part of the community program. The program schedule includes:

**Foundations Associates Dual Diagnosis Enhanced Therapeutic Community**

**Program Schedule**

<table>
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<tr>
<th>Hours</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
<th>Sunday</th>
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<tr>
<td>6:00-7:30</td>
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<td>Sleep in</td>
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<td>Breakfast/</td>
<td>Wake Up</td>
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<td>Medication</td>
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<tr>
<td>7:30-8:00</td>
<td>Meditation</td>
<td>Meditation</td>
<td>Meditation</td>
<td>Meditation</td>
<td>A.A</td>
<td>A.A</td>
<td>A.A Meeting</td>
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<tr>
<td>8:00-8:30</td>
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<td>Transport to</td>
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<td>Meditation</td>
<td>Breakfast at</td>
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<td>Group</td>
<td>Group</td>
<td>Meeting</td>
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<td>Free Time</td>
<td>A.A</td>
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<td>Group</td>
<td>Group</td>
<td>Free Time</td>
<td>Free Time</td>
<td>A.A Meeting</td>
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<tr>
<td>9:30 AM</td>
<td>Education/</td>
<td>Education/</td>
<td>Education/</td>
<td>Education/</td>
<td>A.A Meeting</td>
<td>A.A Meeting</td>
<td>Free Time</td>
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<td>A.A Meeting</td>
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<td>Break</td>
<td>Groups</td>
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<td>Group</td>
<td>Family</td>
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<td>(Time)</td>
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<td>Biblio</td>
<td>Varies</td>
<td>According</td>
<td>Family</td>
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<td>(Time)</td>
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<td>According</td>
<td>Family</td>
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<td>(Time)</td>
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<td>To</td>
<td>To</td>
<td>To</td>
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<td>Free Time</td>
<td>Outing</td>
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<td>6:00 PM</td>
<td>Chores</td>
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<td>Chores</td>
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<tr>
<td>6:30 PM</td>
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Progressive levels of privilege: The decision for movement through the level system is contingent upon psychiatric stability, effective movement through the DRA recovery steps, attainment of treatment goals, and various responsibility factors. The onus of progress occurs through reinforcement of member responsibilities both to themselves and the community at large. Steps and their attendant responsibilities occur as follows:

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Entry Level

Entry level is an orientation phase for transitional living, offering the consumer an opportunity to become comfortable with the staff, residents and structure of transitional living. Consumers’ requests for visits with family, initial case management needs, and doctor’s appointments are scheduled through the primary therapist.

Privileges

- Permitted five dollars per week
- 10:00 p.m. in room curfew Sunday – Thursday; 11:00 Friday and Saturday
- Watch movie and TV programs as regularly scheduled, according to majority rule. Personal entertainment devices of any kind are not permitted
- Attend all in-house social activities when scheduled; attend external 12-step meetings. Participation in Saturday, recreational, and other outings determined by primary therapist

Therapeutic Goals to Proceed to Level 1

- Introduce him/herself to, and learn names of, staff and residents.
- Work cooperatively with peer mentor to learn program structure.
- Meet with primary therapist to develop a treatment plan and participate in individual counseling and case management. Establish entry-level goals and complete the treatment plan.
- Read Community Handbook and be responsible for knowing rules, regulations and policies.
- Watch the “Twelve Steps of DRA” video and be capable of discussing.
- Maintain a signature list of all 12-Step meetings attended.
- Accept supervision of staff or case manager 24-hours per day.
- Know daily schedule and attend all meetings, groups, meals, and scheduled appointments on time.
- Accept chore assignments and carry out timely and completely.

- Be assigned a senior level (Level 2) resident as a ‘peer mentor’
- Sunday supervised visitation
- Two supervised ten minute phone calls permitted each day after 6:00 p.m. Phone calls to sponsor, physician, case manager, legal aid, and attorney are permitted as needed if coordinated with primary therapist. All other calls must be approved by primary therapist.
Inform therapist of all upcoming appointments.
Complete and sign food stamp application for residential services, if applicable.
Meet with psychiatrist for psychiatric evaluation and medication consultation.
Take medications as prescribed.
New admissions must be enrolled on this level for a minimum of six days before advancement. Consumers who have relapsed or demonstrated increased symptoms must remain on this level until the consumer and therapist mutually agree that stability has returned.
Complete and present Step 1 and become familiar with DRA book and workbook.

Level 1: Intensive Residential Phase

Individual weekly therapy remains a part of the Level 1 phase of treatment. Level 1 residents may begin to take part in weekly outings and off-campus support group meetings. If the clinical treatment team (including the Housing Coordinators, Clinical Director, Psychiatrist, and Psychologist) has determined through case review that the consumer has successfully completed Entry Level requirements, the consumer may proceed to Level 1. This phase is the beginning of the consumer’s transition back to independent living.

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Privileges

- Participate in House Meetings as a voting member; Participate in Peer Relapse/Rule Infraction Committee as a voting member
- Sunday supervised visitation
- Two supervised ten minute phone calls permitted each day after 6:00 p.m. Phone calls to sponsor, physician, case manager, legal aid, and attorney are permitted as needed if coordinated with primary therapist
- Church attendance is permitted, however, the consumer must arrange transportation in advance and approval of arrangements is at the discretion of the primary therapist. Time frames are strictly limited by the primary therapist.

Therapeutic Goals to Proceed to Level 2

- Obtains a temporary or permanent sponsor, complete the Sponsorship Form, and maintains a documented history of a minimum of 3 sponsor contacts per week.
- Learns the type, purpose and potential side effects of prescribed medications.
- Takes medications as prescribed.
- Demonstrates an effort to work collaboratively with all community members.
- Maintains weekly 12-Step meeting attendance lists.
- Follows all program policies and house rules including entry level responsibilities.
- Completes homework assignments; demonstrate active participation in all meetings and groups.
- Meets with the primary therapist once per week and demonstrates progress in working toward treatment goals.
- Symptoms and cravings are reducing and consumer is identifying effective skills for coping.
- Has remained in the program for a minimum of 20 days.
- Presents, with feedback from peers, Step 2 from the DRA Workbook.

Level Two: Intermediate Residential Phase

During this phase, Foundations’ staff assists the consumer in strengthening independent living.
skills and accepting greater responsibility for personal recovery.

Privileges

- Permitted twenty-five dollars per week
- 11:00 p.m. in room curfew Sunday – Thursday; 12:00 Friday and Saturday
- Watch movie and TV programs as regularly scheduled, according to majority rule. Personal entertainment devices of any kind are not permitted
- Be allowed to attend one off-site meeting per week if accompanied by a Level 3 (or higher) resident; be allowed to attend one breakfast and one dinner at step-up house per week

Therapeutic Goals to Proceed to Level 3

- Develops a relapse and symptom identification plan that defines his/her triggers for relapse and symptoms of mental health condition.
- Identifies 2-3 discharge placement options in conjunction with his/her primary therapist and evaluates steps to implement those options. Step-up and independent housing is determined on an individual need and availability basis and is not guaranteed for any resident. All residents must identify a series of options for post-treatment placement and services.
- Participates in at least one House Committee meeting per week.
- Fills medication boxes independently; demonstrates understanding regarding medication schedules.
- Takes medications as prescribed.
- Consistently demonstrates an ability to cook and clean up after his/herself, including caring for own clothing, room, etc.
- Consistently demonstrates an ability to maintain good hygiene and an orderly environment.
- Continues to meet or exceed all previous requirements.
- Demonstrates continued improvement based upon his/her treatment plan as discussed in weekly sessions with the primary therapist.
- Symptoms and cravings are episodic and largely reduced or managed. Consumer frequently applies effective coping skills.
- Has remained in the program for a minimum of 34 days.
- Is willing and capable of Peer Mentor status for new residents.
- Presents, with feedback from peers, Step 3 in the DRA Workbook.

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Level Three: Transitional Phase

Elevation to this phase indicates that the clinical treatment team feels the consumer has successfully completed Foundations’ Intensive Outpatient Program.

Privileges

- Permitted forty dollars per week
- Midnight in-room curfew.

- Participate in House Meetings as a voting member; Participate in Peer Relapse/Rule Infraction Committee as a voting member
- Be allowed two 8-hour passes and two overnight visits with immediate family per month with staff approval; Written pass requests must be submitted and approved by clinical team at least 24-hours in advance and overnight visits 72-hours in advance

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**Therapeutic Goals to Proceed to Level 4**

- Accepts total responsibility for all medical and case management needs, including refilling of medications and informing staff of any appointments or difficulties as soon as possible. Takes all medications as prescribed.
- Contacts and pursues 2-3 discharge placement options in conjunction with his/her primary therapist and has pursued any needed steps to implement those options.
- Signs in and out for passes in person with RC; abides by approved pass timeframes
- Has developed a personal budget.
- Attends 4 off-site 12-step meetings weekly and maintains attendance sheet.
- Demonstrates consistent empathy and concern, tolerance, and a non-judgmental supportive attitude toward other community members.
- Consistently supports Foundations’ policy and procedures.
- Demonstrates compliance with all previous lower level requirements, including sponsor contacts.
- Establishes membership in a 12-Step Home Group.
- Demonstrates consistent progress in individual & conjoint session goals with primary therapist and symptoms and cravings are well controlled.
- Continues membership in at least one House Meeting per week.
- Establishes work, volunteer, or an involved structured programming 20 hours per week or more.
- After completion of psychoeducation/therapy groups, residents must collaboratively develop a therapeutic contract with skills coordinator for any services beyond the initial eight weeks in treatment. The therapeutic contract identifies individual treatment goals, community goals, and financial arrangements for continued stay.
- Cravings are significantly reduced and managed; Symptoms, if present, are effectively managed. Consumer consistently applies effective coping strategies.
- Has remained in the program for a minimum of 60 days.
- Begins, with feedback from sponsor or primary therapist, Step 4 in the DRA Workbook.

**Level Four: Community Reintegration Phase**

Promotion to Level Four reflects that the consumer is working the 12-Step recovery program on a daily basis, as determined by the clinical treatment team and the consumer, and consistently demonstrates honesty and a sense of responsibility toward themselves and others.

Privileges

- Permitted sixty dollars per week
- Midnight in-room curfew Sunday – Thursday and 2:00 a.m. in-room curfew Friday and Saturday.
- Permitted a television and VCR in the bedroom
- After psychoeducation completion, may be allowed use of personal vehicle to attend work, meetings, and appointments as approved by treatment team. Resident must show proof of insurance and a valid driver’s license.
- Participate in House Meetings as a voting member; Participate in Peer Relapse/Rule Infraction Committee as a voting member
- Be allowed three off-site passes per week, three overnight passes, and one 48-hour pass per month with staff approval. Written pass requests must be submitted and approved by clinical team at least 24-hours in advance and overnight visits submitted 72-hours in advance
- Be considered for placement in independent living house
- Step-up resident may, at the discretion of the Housing or Skills Coordinator, leave the facility to care for personal needs such as shopping, banking, physical exercise, meetings with sponsor, etc. for up to two hours at a time; Must sign in and out in person with RC staff if living in step up facility
- Be allowed to seek up and no more than 40 hours per week part-time employment

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Therapeutic Goals to Proceed to Level 5

- Demonstrates willingness and ability to lead one “Big Book” or Step-Study group for peers per week.
- Schedules and attends one conjoint session with sponsor and primary therapist per month.
- Attends four off-site meetings per week.
- Complies with all vocational, volunteer, or other structured time goals.
- Schedules and attends one to two therapy sessions per month with primary therapist and demonstrates consistent progress toward established treatment and/or therapeutic contract goals.
- Complies with all individual, financial/rental, reintegration/discharge and community goals established in the Therapeutic Contract.
- Meets minimally twice monthly with skills coordinator to review progress toward therapeutic contract.
- Continues to meet all other previous requirements such as support group meetings, maintain sponsor contact, passes, taking all medications as prescribed, attendance weekly Aftercare meetings, etc.
- Follows personal budget.
- Cravings are reduced and managed; Symptoms, if present, are effectively managed.
- Has remained in the program for a minimum of 90 days
- Continues step work with sponsor as demonstrated through documented and verified sponsor contacts

Level Five: Independent Living

Attainment of Level Five status means the individual has demonstrated commitment to recovery and personal growth. Level Five reflects that the individual has consistently been responsible for all aspects of his/her recovery, is working the 12-Step recovery program on a daily basis, and demonstrates honesty and a sense of responsibility toward themselves and others.

Privileges

- The resident is permitted a full range of privileges and is responsible for independently managing medications and finances.
Level 5 Responsibilities

- Mentors a Level Four resident.
- Continues with self-help group involvement, home group membership, and work with sponsors while maintaining emotional/psychiatric stability.
- Works, participates in vocational programming, attends school full-time, or volunteers in a structured setting a minimum of 20 hours per week. Work schedule must flexibly permit mandatory attendance in Foundations’ weekly Aftercare program. Work hours cannot exceed 48 per week.
- Complies with all individual, financial/rental, reintegration/discharge, and community goals established in the Therapeutic Contract.
- Meets minimally monthly with skills coordinator to review progress toward therapeutic contract.
- Cooperates with housemates, holding weekly house meetings, maintaining living quarters, and sharing household chores. Residents are responsible for dividing household duties equitably.
- Schedules and attends one therapy sessions per month with primary therapist and demonstrates consistent progress toward established treatment and/or therapeutic contract goals.

Movement through the program is consistently reevaluated through consumer peer review committees, house meetings, and through individual therapeutic contacts. Level regression may occur as a result of increased psychiatric symptoms, relapse, during increased environmental stressors, or due to rule violations. Depending upon the circumstances, both the community and the treatment team actively participate in most decisions regarding level changes.

Following the initial intensive six-eight week phase of care, a decision regarding whether the individual remains in the Foundations’ continuum is based upon both service availability and medical need. Consumers with repeat inpatient psychiatric and substance abuse treatment histories, an inability to maintain extended sobriety without supports, and presenting with high-risk environments are typically deemed medically appropriate for continued care. When services are unavailable or inappropriate, the team’s focus is to enhance natural and formal support systems and aggressively work toward reintegration planning during the final two weeks of participation in the intensive phase of treatment. Participation in Foundations’ Aftercare program is a requirement for all consumers who remain in Foundations’ housing following intensive treatment. Aftercare services are strongly encouraged for all other program graduates and include big-book study, recreational activities, and a focus on reintegration issues that typically affect the dually diagnosed individual.

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If DDEHH services are appropriate and available, the resident is offered step-down (ASAM PPC-IIR Level III.3 half-way houses) bundled with a range of nonresidential services including

individual, group, and family therapy. DDEHH services average 2-4 months and are provided in 5-bed houses licensed by the Department of Mental Health and Developmental Disabilities and located within blocks of DDETC housing. As opposed to the 24-hour staffing plan in the intensive program, clinical staff are available 8-hours per day with twenty-four hour crisis call availability through both the Foundations Associates’ clinical staff and the regional mobile crisis response team. Consumers check-in with intensive residential program staff when arriving and leaving the premises for approved passes. A master level Independent Living Housing Coordinator works closely with each consumer in this level of care to develop and address goals and reintegration planning, with life skills, personal responsibility, independence, and structure, as the primary focus of treatment. A vocational specialist works with all consumers to address the spectrum of vocational educational needs from developing resumes and establishing a job search plan to directly teaching skills through a supportive employment plan. All residents participate in development of an individualized Therapeutic Contract that defines community, individual, and financial/rental goals and arrangements. There is no treatment charge for this level of care, and consumers are required to be competitively employed and pay market rate rent. Food and utilities are included under this arrangement.

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Dual Diagnosis Enhanced Independent Living (DDEIL)

Supervised independent living is the final phase of the Foundations’ continuum. Foundations’ support services are determined via an individualized therapeutic contract that identifies community, individual, vocational and financial goals/agreements. Therapy sessions are reduced to monthly or bimonthly contacts, and the consumer is responsible for coordinating community services, psychiatric visits, medications, and other needs. Aftercare participation remains a standard requirement. Length of stay in DDEIL housing ranges from 2-4 months. As with the halfway house, consumers are required to be competitively employed and pay market rate rent. Food and utilities are included under this arrangement.

Principles and Course of Treatment

Foundations Associates’ residential program attained model project status for integrated treatment by SAMHSA as one of three exemplary programs in the United States featured at the Co-occurring Institute of the SSDP V (State System Development Program 5th) Conference, and the residential services were also recently selected as a finalist for the American Psychiatric Associations’ (APA) Gold Achievement Award. The residential program offers a comprehensive treatment plan covering a continuum of case management, psychopharmacologic
treatment, vocational rehabilitation, psychoeducation, individual and group therapy, and 12-step treatments and interventions. The program premise is based upon key elements best described by Minkoff as the seven principles inherent in an integrated model of care:

1. **Comorbidity is an expectation, not an exception**

Based upon the 4-quadrant subtyping of disorders, Foundations Associates has historically served the high severity SPMI/substance dependency population, with the majority of consumers having experienced multiple psychiatric and substance dependency treatment episodes prior to admission. Pacing treatment according to individual needs was early identified as an essential component and, despite frequently needing to stabilize presenting issues such as post withdrawal or subacute symptomatology, program elements repeatedly include educational components that address the confluence of disorders. Individual educational and treatment elements are of short duration, frequently repeat topics, and reinforce treatment of the consumer at his/her level of cognitive understanding.


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A continuum of services was designed to address integrated care across all service levels, including case management, therapeutic interventions, 12-step approaches (i.e., application of a dual recovery model), and psychopharmacologic treatment. While the goal was to recruit staff trained in integrated theories, where possible, integrated skills were early discovered to be rare commodity. Hence, staff training, workshops, conferences, educational forums and the like are encouraged for all staff to broaden experience in dual treatment. Likewise, staff members rotate presentations in weekly meetings on contemporary treatment approaches to integrated care. As part of the Dual Diagnosis Recovery Network (DDRN), a library that serves as a national repository of dual diagnosis research, information is available onsite to all staff.

2. **Successful treatment requires most importantly the creation of welcoming, empathetic, hopeful, continuous treatment relationships, in which integrated treatment and coordination of care are sustained through multiple treatment episodes.**

All program elements are directed toward emphasizing staff/client relationships in an engaging, non-punitive atmosphere. From the initial assessment information, a plan of care is established that views both disorders as co-primary, addresses dual recovery, and is based upon the individual’s readiness to change. Staff is directed not to impose traditional treatment goals, rather to establish client driven plans of care. Relapses and decompensations are viewed as characteristic of the pathology of the conditions and efforts are aggressively directed to re-
engaging the client when those events occur. These episodes are used to enhance consumer introspection regarding triggers and symptoms of relapse and decompensation and are addressed through community meetings and individual therapy sessions.

Rather than relying on traditional approaches, efforts are made to develop resources that meet the needs of the dually diagnosed consumers. For example, housing is an always-difficult service to obtain for the complex dually diagnosed consumer. Absent sufficient resources to place consumers following treatment in the continuum, Foundations empowered consumer groups and provided financial assistance to develop cooperative housing based upon Oxford residential models. In addition, collaborative relationships were established with several community-based programs to earmark housing services specifically for Foundations’ populations.

3. Within the context of the continuous integrated treatment relationship, case management and caretaking must be balanced with empathetic detachment and confrontation in accordance with the individual’s level of functioning, disability and capacity for treatment adherence.

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The balance between traditional normative mental health caretaking versus substance abuse empathetic detachment is attained through individual plans of care that are developed through the course of a aggressive treatment planning. Ongoing modification to plans of care occurs through weekly team evaluation of the individual’s progress in treatment. Typically efforts during the earlier phases of treatment are directed toward stabilizing psychiatric symptomatology and managing withdrawal symptoms and associated cravings. Hence, typically the first two weeks result in a higher level of staff case management and caretaking efforts. As stability progresses the onus gradually shifts to responsibilities the consumer bears in directing the course of treatment. Level systems, based upon symptom and withdrawal management and progress in the program, direct the changes to the structure of the relationship. Level systems offer an earned system of privileges that combine completion of treatment goals with effective step work and milieu accomplishments to define when and how progression occurs. Successful progression is determined in house meetings by both the consumer population and therapy staff.

4. When mental illness and substance disorder co-exist, both disorders should be considered primary, and integrated dual primary treatment is required.

Aggressive psychopharmacologic treatment and monitoring, applied in conjunction with recovery principles such as sober, structured housing and DRA are essential to a co-primary
treatment approach. Given the severity of the population treated at Foundations Associates, we early identified the need to extend the length of program participation outside of normative single-diagnostic treatment periods. Instead, consumers are evaluated individually according to progress in the program, level of stability attained, and related characteristics before movement to less restrictive care occurs. Even when consumers are moved to Dual Diagnoses Enhanced Halfway House levels of care, medications continue to be monitored closely, as is attendance at 12-step meetings and participation in aftercare programs. In the event of relapse or decompensation, interventions are rapidly rallied either through intensive psychiatric evaluation and monitoring, relapse evaluation committees and modifications to the individual’s therapeutic contract/treatment plan, or a combination of both. When decompensation in one sphere occurs, attendant monitoring of the other sphere is accordingly engaged.

5. Both psychiatric illnesses and substance dependence are examples of chronic, biological mental illness which can be understood using a disease and recovery model. Each disorder is characterized by parallel phases of recovery: acute stabilization, engagement and motivational enhancement, active treatment, and prolonged stabilization, rehabilitation and recovery.

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Psychoeducation is a hallmark of this principle, in that education on the disease model, management strategies, medications, self-monitoring, inter-relatedness of conditions, and the like bring to bear the element of hope in recovery and facilitate movement through stages of change. Psychoeducation occurs through structured group programs, house meetings, residential therapy programs, family education programs, and use of a NAMI model, Bridges, which offers consumer led in-house education groups. All psychoeducational groups integrate dual recovery as a central theme, emphasizing methodologies for maximizing quality of life. In addition, a significant majority of staff includes both individuals in recovery and graduated program consumers.

Similarly, the impact of the community as a whole is significant in facilitating change. Peer Mentors, community driven groups and committees, and a general theme of consumer empowerment immeasurably emphasize recovery elements.

6. There is no single correct dual diagnosis intervention. Appropriate practice guidelines require that interventions must be individualized, according to the subtype of dual disorder, specific diagnosis of each disorder, phase of recovery/stage of change, and level of functional capability or disability.
The protocols discussed at the Assessment section of this document are used to define level and extent of symptomatology, history of substance use, and readiness to change. These dimensions direct the approach to treatment and clinical treatment matching with the model of intervention. Again, the population treated at Foundations Associates predominantly consists of the 10% of the population using in excess of 70% of the healthcare resources. As such, the severity of the conditions reinforce that movement through stages of change must occur at a pace directed by the consumer. Typically early phases of treatment are directed at stability, medium phases at defining personal goals and plans for attaining those goals, and later phases toward careful, deliberate reintegration.

While the agency espouses an abstinence orientation, we recognize the psychopathology of the population, the typical multiple episodes of treatment, and the importance of an effective harm reduction model. Consumers not ready for an abstinence model are treated non-punitively and efforts remain directed at addressing the individual’s motivation for change at whatever stage s/he is currently prepared.

7. Within a managed-care system, any of the individualized phase-specific interventions can be applied at any level of care. Consequently, a separate multidimensional level of care assessment is required.

ASAM dimensions are applied at admission to attempt to match treatment/placement needs within the system. Domains are operationalized to direct the plan of care by incorporating various protocols that measure psychiatric symptomatology, treatment history, and a combination of other psychiatric and substance dependency measures. While reliance on self-report information contains certain faults in data gathering, it permits a measure of the consumer’s perception of need for treatment. That perception is the basis for defining a client driven plan of care that cannot be discounted.
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Evaluation

As described throughout this report, program practices have evolved considerably throughout the course of this project based on feedback from consumers, clinicians, administration, and external consultants. Through the Targeted Capacity Expansion grant program, Foundations implemented a longitudinal evaluation of integrated treatment outcomes in collaboration with the Tennessee Department of Mental Health and Developmental Disabilities with highly promising results regarding outcomes related to integrated intervention modalities.

SUMMARY OF BASELINE FINDINGS

Substance Use:
- ASI Alcohol Use Composite Score was slightly lower than ASI normative data (34th percentile)
- ASI Drug Use Composite Score was slightly higher than ASI normative data (75th percentile)
- Predominant drugs-of-choice included alcohol, cocaine (crack), and cannabis
- 70% reported polysubstance abuse of 5 or more years (51% report 10 or more years)
**Mental Health Disorders:**
- ASI Psychiatric Composite Scores were substantially higher than ASI norms (99th percentile)
- BSI General Psychiatric Severity Ratings were in the 79th percentile relative to psychiatric inpatient normative data.
- 52% had been treated 3 or more times in inpatient psychiatric settings
- 60% reported a serious thought disorder accompanied by hallucinations, such as schizophrenia, schizoaffective, bipolar with psychotic features, etc.
- The average number of DSM-IV Axis I Diagnoses was 2.52.
- The average Global Assessment of Functioning (GAF) Score was 46.

**Associated Problems:**
- ASI Medical Composite Score was slightly higher than ASI normative data (63rd percentile)
- 51% of Foundations’ consumers reported chronic medical problems
- ASI Legal Composite Scores were higher than ASI normative data (80th percentile)
- 51% had been incarcerated for one month or more in their lifetimes
- ASI Family/Social Composite Scores were higher than ASI normative data (79th percentile)
- Rates of homelessness or unstable housing were substantial (37%)
- Rates of abuse were substantial, including emotional (82%), physical (66%), and sexual (45%)
Mental Health Disorders & Functional Status:
- BSI results showed a significant reduction in psychiatric symptomatology from the 75th percentile at baseline to the 42nd percentile after 6 months.
- The PAI Schizophrenia subscale results documented substantial reductions in symptoms of thought disorder, specifically confusion, lack of orientation, and difficulties with attention and concentration.
- Measures of employment income show steady increases over time, from $183/month at baseline to $457/month after six months and $534/month after one year.

Service Utilization
- Substantial reductions in inpatient visits (65% reduction in inpatient care for physical problems, 88% reduction in inpatient psychiatric treatment, and 91% reduction in inpatient substance abuse treatment).
- Substantial reduction in utilization of emergency room services (57% reduction in emergency room care for physical problems, 92% reduction in emergency room psychiatric visits, and 90% reduction in emergency room visits related to substance abuse).
- Increase in appropriate utilization of less restrictive, community-based outpatient services (178% increase in outpatient visits for physical problems, 94% increase in outpatient psychiatric visits, and 5% reduction in agency-based outpatient visits related to substance abuse, accompanied by a 108% increase in use of self-help.)

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EVALUATION DESIGN

The overall research plan was to assess each consumer entering integrated services in several key clinical, functional, and life domains, and closely follow each consumer over the year following treatment at Foundations, to permit evaluation of change over time. Within this framework, all consumers entering Foundations were offered an opportunity to participate in the research model that repeats administration of specific protocols at admission and again both six and twelve months following completion of the treatment program. Assessment included a comprehensive evaluation of major life domains and placement/service needs based upon the American Society of Addiction Medicine Patient Placement Criteria for the Treatment of Substance-Related Disorders (ASAM PPC-IIR) standards, evaluation of the individual’s preparedness for services, and use of multiple sources of information to assess each outcome domain. Each primary outcome domain comprised multiple measures based upon client self-report, evaluator observations, and objective indicators. This approach had significant benefit because it minimized bias resulting from relying too heavily upon any single source of information, and it provides multiple indicators for use in latent variable analysis (a method which relies on multiple
measures to eliminate measurement error). The overall interview length was minimized by eliminating items redundant with other measures. Evaluators also meet periodically with program staff and consumers to allow for informal qualitative feedback regarding program process and outcome. At a global level, domains and associated measures include:

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<th>Outcome Domain</th>
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<td>Substance Abuse</td>
<td>• Addiction Severity Index</td>
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<td>• Government Performance and Results Act (GPRA) Report Form</td>
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<td>• SOCRATES Scale</td>
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<td>• Objective assessment (Urine screens)</td>
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<td>• Program treatment records</td>
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<td>Mental Illness</td>
<td>• Brief Symptom Inventory (Subset of SCL-90R)</td>
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<td>• Schizophrenia Subscale of the Personality Assessment Inventory</td>
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<td>• Mental health treatment history</td>
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<td>• Program treatment records</td>
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<td>Cost Effectiveness</td>
<td>• Measures of program costs, including costs of treatment and associated expenses.</td>
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<td>• Consumer service utilization measures from program records and available databases, including medical/psychiatric expenses, income, employment, public support, etc.</td>
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<td>Quality of Life</td>
<td>• Lehman’s Quality of Life Interview (Objective Items)</td>
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<td>Consumer Satisfaction</td>
<td>• Client Satisfaction Questionnaire-8 (CSQ-8)</td>
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<td>Empowerment</td>
<td>• Empowerment Scale</td>
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Evaluation Implementation

Sample size projections in the grant application submitted in Spring of 1998 proposed serving 144 individuals during the grant period. Actual numbers served exceeded that target by 49%, with a total of 214 consumers entering Foundations’ residential program during the grant period. Of those 214 consumers, four declined participation in the research project (or were deemed unable to provide informed consent), providing a total of 210 baseline GPRA assessments.

Research follow-up efforts also exceeded the goal set in the initial grant proposal (i.e., 70%). Of the 179 consumers who were six months or more from their intake interview at the end of the study, 136 (76%) have been assessed. Twelve-month follow-up percentages are even better, with 119 of 144 possible assessed (for a rate of 83%). For many of the outcome analyses conducted herein, it is critical to at least have one follow-up assessment available, and final efforts obtained interviews from 127 of 145 (88%) consumers eligible for six- or twelve-month followup. This leaves on 18 consumers on whom no follow-up data are available. Two of those had died prior to the scheduled follow-up, approximately 8 left the region with no forwarding...
address and could not be located, and the remainder declined participation in the follow-up process.

It is worth noting that this followup percentage exceeds commonly accepted standards for follow-up participation in addiction treatment research, usually considered as 80%. This is a substantial accomplishment given the general lack of resources available for evaluation in TCE projects relative to the more rigorous research from which the 80% standard is derived. As such, we feel confident that findings from this evaluation project include enough of the initial sample to be representative of Foundations’ typical target population, and are not biased due to poor follow-up.

In order to empirically test for bias due to differential follow-up, the baseline characteristics of those persons participating in follow-up versus those persons not participating in follow-up. No significant differences between groups were observed on baseline variables such as gender, ethnicity, drug of choice, severity of addiction or mental illness, or housing status. This provides further support to the generalizability of findings this sample to the larger population of consumers with co-occurring substance use and mental health disorders.

Due to the unusually high prevalence of serious psychiatric disorders in the study population, extensive psychometric validation was conducted on the use of the Addiction Severity Index, Brief Symptom Inventory, and Personality Assessment Inventory in this sample (Doub, 2001,

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available online at <http://members.home.net/doubtw/DoubDissertation.pdf>, and results strongly support the validity and reliability of these measures for subsequent analysis.

Baseline Findings

Results documented a substantial degree of initial impairment (with regard to substance use, mental health symptomatology, and other problems), with a number of common clinical issues emerging. In general, the severity of presenting clinical problems observed in the typical consumer seeking Foundations’ clinical services was striking. Findings reported reflect baseline data collected on 210 research participants in Foundations’ residential program. Regarding baseline status, a clear pattern of serious co-morbid symptomatology was evident in consumers engaging with Foundations’ services.

As noted throughout this document, Foundations consumers typically have a long history of unsuccessful treatment for their addictions and psychiatric problems. As such, they can be a
very challenging population to treat effectively in single focus treatment systems, making them ideal candidates for Foundations’ integrated residential program.

The following figure shows the typical profile of substance use reported by consumers entering Foundations’ treatment program. It is noteworthy that many consumers appear to prefer “mainstream” substances and there is little evidence of growing drug trends such as ecstasy, heroin, methamphetamine, etc. Preliminary data from a psychometric study of the ASI (Doub, 2001) suggest a moderate correlation between psychiatric severity and alcohol use, but not between psychiatric severity and other drug use. This may suggest that persons with more serious psychiatric disorders will prefer legal, more easily accessible and socially acceptable means of substance use.

![Substance Use - 30 Days Prior to Admission](image-url)
In addition to categorical reports of use, ASI and GPRA data provide information on the total number of days each substance was used in the 30 days prior to program admission. Both measures use this indicator as a rough proxy for the severity of addiction. As such, the average days of reported use have been calculated for each substance reported by each consumer. If a consumer does not report using a given substance (e.g., opiates), he or she is not included in this calculation. This provides an approximate measure of the severity of addiction prior to treatment services for those individuals using each substance.

**Targeted Capacity Expansion Grant - Project End Report**

**Days of Reported Use (for those using a given substance)**

<table>
<thead>
<tr>
<th>Days of Use</th>
<th>Opiates</th>
<th>Cocaine</th>
<th>Cannabis</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Days of Use (of last 30)</td>
<td>2.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The severity of addiction problems are further reflected in the Addiction Severity Index Composite Scores for Alcohol Use and Drug Use (shown on next page). ASI Composite Scores are calculated from sets of ASI items, range from zero to one, and higher scores indicate greater severity.

Relative to ASI normative data (from McLellan, 1992), Foundations’ residential consumers appear to have slightly less severe alcohol problems than the inpatient population studied by McLellan (inpatient norms are used for comparison because no residential norms are provided for the ASI and the nature of inpatient services for addiction has changed considerably since McLellan’s 1992 study). Conversely, Foundations’ consumers appear to exhibit slightly more severe addiction to other drugs than McEllans’ normative sample. While McEllan’s data provide an interesting standard for comparison, they provide a poor standard for comparative interpretation due to the small normative sample used by McEllan and its lack of representativeness. In spite of the weaknesses of the normative data, however, they do provide at least a loose reference for interpreting ASI composite scores, which otherwise have no metric for interpretation other than longitudinal comparisons (which will be shown later in this report).

*Note - Less than 5% reported use of Heroin, Methadone, Barbiturates, Hallucinogens, or Inhalants.
While it is clear that the severity of addiction at the onset of treatment is significant, many of these consumers have had difficulties related to substance use and addiction for much of their lives. The following figure shows lifetime use of alcohol and other drugs in years.

**Targeted Capacity Expansion Grant - Project End Report**

**Years of Reported Use (for those using a given substance)**

- 25.0
- 20.0
- 15.0
- 10.0

**Average Years of Use**

- 0.0
This lifetime of substance use is evidenced by ongoing problems related to addiction:

- 76.4% of Foundations’ consumers report at least one previous treatment for alcoholism during their lifetime, and 81.2% report previous treatment for other drug use.
- The average consumer entering Foundations’ residential program has been treated for alcohol and/or other drug use approximately 6 times in their lifetime.
- 54.3% report a serious drug overdose in their lifetime.
- 25.4% report experiencing serious Alcohol D.T.’s in their lifetime.

**Psychiatric Severity**

Foundations’ consumers report a significant history of psychiatric symptomatology and treatment:

- 87.8% of Foundations’ consumers report at least one previous psychiatric hospitalization during their lifetime.

Perhaps the level of psychiatric severity exhibited in Foundations’ consumers relative to the typical alcohol and drug treatment population is best illustrated by a comparison to McLellan’s (1992) normative data for the ASI.
As shown in the figure, Foundations’ average consumer would place in the 99th percentile of psychiatric severity relative to ASI normative data. Foundations consumers clearly have very different treatment needs than those observed in traditional alcohol and drug treatment settings, as evidenced by the substantial elevation in psychiatric severity, repeated history of treatment for addictive and/or psychiatric disorders, and poor treatment outcomes.

Domain scores from the Brief Symptom Inventory shed even more light on the nature and complexity of psychiatric problems experienced by Foundations’ consumers. Because the BSI

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has well-established normative data, we can compare the psychiatric severity of Foundations to typical mental health consumers in outpatient settings.

**Psychiatric Severity - Brief Symptom Inventory**

0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0

Composite Score

<table>
<thead>
<tr>
<th>Foundations</th>
<th>ASI Normative Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inpatient</td>
</tr>
</tbody>
</table>

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Clearly, Foundations’ consumers report very high levels of symptomatology across all major psychiatric domains. Relative to BSI normative data for psychiatric outpatient consumers, Foundations’ consumers tend to fall around the 70th to 80th percentile in psychiatric severity (i.e., the average Foundations consumer scores higher than 70 to 80 percent of typical psychiatric outpatients). In comparison to general (i.e., nonpsychiatric) population norms, the average Foundations consumer reports psychiatric symptom severity in the 95th to 99th percentile range. Scores from the Personality Assessment Inventory are comparable to the profile observed on the BSI and are therefore not shown.

**Associated Problems – Medical, Social, Economic, Legal, & Family Problems**

In addition to the substantial degree of impairment related to substance use and mental health symptoms, consumers entering Foundations exhibit substantial dysfunction in many other life domains, including medical, social, economic, legal, and familial functioning. Data from the Addiction Severity Index and GPRA measure are useful in describing the extent of these problems:

- **Medical Problems**
  - 85.8% of Foundations consumers have been hospitalized for medical problems during their lifetime.
  - The average consumer entering Foundations’ residential program has been hospitalized 5.8 times for medical problems in their lifetime.
  - 29.4% have been hospitalized for medical problems at least once during the twelve month period prior to entering Foundations.
  - 51.3% report that they experience “chronic” medical problems, and 46.7% are taking prescription medication for these problems.
  - 47.1% describe their physical health as “fair” or “poor”.
Housing Needs
- 37% have experienced unstable housing within the 30 days prior to entering Foundations, and 56.3% have lived at their current address less than one year.
- Over 70% of Foundations’ consumers have been housed by other agencies, jails, or hospitals in the 30 days prior to intake, though 11.5% report living in a shelter or on the street prior to intake.

Legal Problems
- 14.7% of referrals come from criminal justice sources.
- 27.9% of Foundations’ consumers are on probation or parole at program intake.
- 67% have been convicted of a crime during their lifetime.
  - 40.1% drug charges
  - 25.4% shoplifting/vandalism
  - 27.4% assault
  - 37.6% disorderly conduct
  - 40.1% DWI
- 50.8% have been incarcerated one month or more during their lifetime.
- 17.3% have been incarcerated at some time during the 30 days prior to entering Foundations.

Employment/Economic
- 24.9% have never held a job longer than 12 months.
- 77.8% received no income from wages in the 30 days prior to entering Foundations.
- Average monthly income from employment for consumers in the 30 days prior to entering Foundations was $183.
- 59.9% rely upon financial support from family or friends.
- Only 53.6% have a valid driver’s license and 35.1% have use of an automobile.

Family and Social
- Family History of Substance Use and Psychiatric Dysfunction
  - Father reported to have alcohol problems 51.8% of time, drug problems 22.8% of time, and psychiatric problems 27.4% of time.
  - Mother reported to have alcohol problems 24.9% of time, drug problems 19.8% of time, and psychiatric problems 34.5% of time.
- 42.6% of Foundations’ consumers have never been married, 27.9% are divorced, and 14.2% are currently married.
- 45.7% are not satisfied with their current living arrangement.
- 41.1% report that they have no close friends.
- Family Problems
  - Of those with a living mother, 60% report conflict with their mother in the 30 days prior to treatment.
  - Of those with a living father, 57% report conflict with their father in
the 30 days prior to treatment.
- Of those with siblings, 65.3% report conflict with their siblings in the
  30 days prior to treatment.
- Of those with a spouse, 67% report conflict with their spouse in the 30
days prior to treatment.
  - History of Abuse
    - 66% report a history of physical abuse (lifetime).
    - 81.7% report a history of emotional abuse (lifetime).
    - 44.7% report a history of sexual abuse (lifetime).

Population Demographics

Foundations consumers are generally representative of the population of the Davidson
County/Nashville, TN metropolitan area in terms of gender and ethnicity. Given that one key
objective of the initial grant application was to create comparable residential capacity for women
at Foundations Associates (which previously only had residential capacity to serve men), it
should be hypothesized that baseline data will show approximately equal numbers of men and
women served. As it turns out, this is indeed the case, and reflects program success in expanding
service capacity for women and meeting that objective. Pie charts show the breakdown of
consumer gender and ethnicity.
Ethnicity

- Hispanic/Latino: 2.5%
- African American: 18.9%
- Asian: 0.5%
- Native American: 2.4%
- Caucasian: 76.2%

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As might be expected given previous data showing that Foundations consumers have been using alcohol and other drugs for an average of 12-20 years, a majority of program participants are 30 years old or older. Again, this underscores the depth of the problem faced by many consumers entering this treatment program, having developed over many years and endured despite an average of more than 10 previous treatment episodes for addictions and/or psychiatric problems.
Number of Consumers

<table>
<thead>
<tr>
<th>Years</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.0</td>
<td>0</td>
</tr>
<tr>
<td>22.0</td>
<td>0</td>
</tr>
<tr>
<td>26.0</td>
<td>0</td>
</tr>
<tr>
<td>30.0</td>
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</tr>
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<td>34.0</td>
<td>0</td>
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<tr>
<td>38.0</td>
<td>0</td>
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<tr>
<td>42.0</td>
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<tr>
<td>46.0</td>
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<td>50.0</td>
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<tr>
<td>54.0</td>
<td>0</td>
</tr>
<tr>
<td>58.0</td>
<td>0</td>
</tr>
<tr>
<td>62.0</td>
<td>0</td>
</tr>
</tbody>
</table>

One perhaps unexpected finding stemming from this descriptive analysis is the diversity in educational attainment. While 27.9% have completed less than 12 years of education, 42.1% have completed at least some post-high school education (e.g., trade school or college), and 10.6% have completed a college degree. To some degree, this suggests a reasonable degree of literacy and speaks to the success we have had in using self-report measures (e.g., BSI, PAI, etc.) for this evaluation project. It also suggests the importance of careful planning in developing program curricula to ensure that material is appropriate to consumers from a relatively broad range of education levels.

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Education

<table>
<thead>
<tr>
<th>College Degree</th>
<th>Less than 12 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.6%</td>
<td>27.9%</td>
</tr>
</tbody>
</table>
Some College or Trade School
31.5%

High School or GED
30.0%

Just as there is significant variability in educational background, there is also significant variability in the environments from which consumers come to Foundations. A typical referral to Foundations comes from a community agency who accepted a consumer for single-focused alcohol and drug treatment or psychiatric care and quickly recognized the presence of a co-occurring disorder that could not be best addressed in the original treatment setting. As such, nearly 80% of Foundations’ consumers report spending time in some type of controlled environment during the month prior to entering Foundations.

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Controlled Environment in 30 Days Prior to Enrollment

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other, Unspecified</td>
<td>7.6%</td>
</tr>
<tr>
<td>None</td>
<td>22.8%</td>
</tr>
<tr>
<td>Psychiatric Treatment</td>
<td>18.3%</td>
</tr>
</tbody>
</table>
Medical Treatment
2.0%

Jail
13.2%

A&D Treatment
34.5%

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Program Outcomes

Perhaps the most useful way of looking at program outcomes is provided by the Addiction Severity Index, a comprehensive assessment tool that measures seven key outcome domains and has been widely used in addictions research. As such, the ASI provides a very useful tool for examining global changes in clinical status in many domains. The price of this extensive breadth, however, is a lack of extensive detail in some domains. For example, the psychiatric domain was not developed to provide an extensive assessment of psychiatric symptomatology, but to provide a global measure of severity (which may be used clinically for screening). A broad look
at results from the ASI shows evidence of a substantial program effect:

**ASI Composite Scores at Baseline, 6 Months, & 12 Months**

<table>
<thead>
<tr>
<th>Composite Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.8</td>
</tr>
<tr>
<td>0.7</td>
</tr>
<tr>
<td>0.6</td>
</tr>
<tr>
<td>0.5</td>
</tr>
<tr>
<td>0.4</td>
</tr>
<tr>
<td>0.3</td>
</tr>
<tr>
<td>0.2</td>
</tr>
<tr>
<td>0.1</td>
</tr>
<tr>
<td>0.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ASI Domain</th>
<th>Baseline 6 Months 12 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical</td>
<td></td>
</tr>
<tr>
<td>Employment</td>
<td></td>
</tr>
<tr>
<td>Alcohol Use</td>
<td></td>
</tr>
<tr>
<td>Drug Use</td>
<td></td>
</tr>
<tr>
<td>Legal</td>
<td></td>
</tr>
<tr>
<td>Family/Social</td>
<td></td>
</tr>
<tr>
<td>Psychiatric</td>
<td></td>
</tr>
</tbody>
</table>

This summary of ASI composite scores shows a significant decrease in substance use, psychiatric symptomatology, and other domains following the residential treatment episode. All changes are statistically significant and the magnitude of the effects are moderate to strong (as measured by effect size; Cohen, 1982). The medical domain shows an increase in severity following treatment, which was not predicted and will be examined in more detail later in this document.

While ASI composite scores are a useful index of clinical change, it is important to recognize some of the problems inherent in relying too heavily upon composite scores. First, composite scores are created to vary between 0 and 1, with higher scores indicating greater pathology. Despite this attempt at standardization, however, composite scores in one domain are not directly
comparable to scores in other domains. For example, a composite score of 0.5 in the drug use domain is worse, relatively speaking, than a composite score of 0.5 in the alcohol use domain. The reason for this relates to the procedures used composite score calculations and these issues are fully discussed in Doub (2001). For the purposes of this report, however, one should simply remember only to compare composite scores with the same domain.

Another significant problem with the composite score mechanism lies in the quantity and quality of the items underlying each domain. In the medical domain, for example, only 3 items are used to calculate a composite score describing medical problems and 4 items are used in the employment index. In contrast, 13 items are used in the family/social domain and 11 are used for the psychiatric domain. Not surprisingly, scales comprising a larger number of items will generally be more stable and reliable (not being as influenced by extreme scores on any single item).

With this in mind, this report will use additional information available from the ASI, the GPRA, and other available assessment tools to more thoroughly examine outcomes in each domain. This analysis will begin the priority outcome domains of substance use and psychiatric symptomatology and will proceed to lower priority domains that were not primary treatment objectives, but would reasonably be expected to improve.

**Drug Use Outcomes**

As discussed earlier, the most common drugs of abuse reported by Foundations’ consumers were alcohol, crack/cocaine, and cannabis. While harm reduction is a basic philosophical tenet of Foundations’ treatment program, outcomes are shown in terms of both abstinence and harm reduction models to simplify interpretation and comparability with other research.
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As shown in the preceding figures, there was a substantial decrease in substance use in all major drug categories following treatment. In terms of effect size (Cohen, 1982), these effects may all be considered “large” and statistically significant. This is clear evidence of program effectiveness in one of its primary goals, to reduce substance use.

For the purposes of this analysis, substance use at followup was only examined for consumers who reported using a given substance at baseline. For example, if a consumer did not use alcohol during the 30 days prior to intake, he or she was not included in the 6- and 12-month
abstinence figure. While this method has its advantages and disadvantages, it is common is addictions research and most fairly represents a consumer’s success in addressing addiction problems with problem substances. By including consumers who report no baseline alcohol problems in the followup numbers, followup abstinence rates would be improved, but would not accurately reflect program effectiveness. The primary weakness of this method is that limitations in sample size may sometimes become a factor when analyses are restricted to a single substance with complete follow-up data. This is why abstinence rates were only calculated for the most common substances reported by Foundations consumers, as calculations for rarer substances (e.g., heroin, methamphetamines) would have reduced sample size to the point where abstinence estimates would be unreliable.

One interesting result of this analysis is that Foundations apparently has slightly better success in reducing illegal drug use (i.e., cocaine and cannabis) relative to alcohol. As shown in the preceding figures, abstinence rates and actual days of substance show modestly better treatment outcomes for consumers using those drugs. One must be careful not to exaggerate the significance of this observation, as the differences are not very large in real terms. However, this pattern does suggest the possibility of some differences in the way consumers respond to integrated treatment for alcohol dependence versus drug dependence. As discussed in Doub (2001), this may represent a stronger relation between psychiatric severity and alcohol use than there is between psychiatric severity and use of cocaine or cannabis.

**Psychiatric Severity**

As in the alcohol and drug use domains, Foundations’ treatment program shows significant effectiveness in reducing psychiatric symptomatology. This is evident both at the global level described by the ASI psychiatric composite score and in responses to items describing specific psychiatric symptoms.
<table>
<thead>
<tr>
<th>Composite Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4</td>
</tr>
<tr>
<td>0.3</td>
</tr>
<tr>
<td>0.2</td>
</tr>
<tr>
<td>0.1</td>
</tr>
<tr>
<td>0.0</td>
</tr>
</tbody>
</table>

Psychiatric

Baseline 6 Months 12 Months

<table>
<thead>
<tr>
<th>Experiencing Problems with...</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
</tr>
<tr>
<td>90%</td>
</tr>
<tr>
<td>80%</td>
</tr>
<tr>
<td>70%</td>
</tr>
<tr>
<td>60%</td>
</tr>
<tr>
<td>50%</td>
</tr>
<tr>
<td>40%</td>
</tr>
<tr>
<td>30%</td>
</tr>
<tr>
<td>20%</td>
</tr>
</tbody>
</table>

Percentage Reporting (last 30 days)

<table>
<thead>
<tr>
<th>Depression</th>
<th>Anxiety</th>
<th>Hallucinations</th>
<th>Suicidal Thoughts</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Baseline 6 Months 12 Months

---

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Days with Psychiatric Problems in Last Month

<table>
<thead>
<tr>
<th>Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
</tr>
<tr>
<td>25</td>
</tr>
<tr>
<td>20</td>
</tr>
</tbody>
</table>
As shown by the ASI psychiatric domain score, Foundations’ consumers show statistically significant reductions in psychiatric severity following treatment. This reduction is meaningful in terms of effect size, as well, with an eta squared of 0.22, consider moderate to large by Cohen (1982). While it is clear that many of Foundations’ consumers continue to experience significant psychiatric symptoms, this represents meaningful symptom improvement in a population of consumers with involved histories of treatment for serious and persistent mental illness.

Improvements in the ASI composite score are reflected in individual ASI items, including questions regarding problems with depression, anxiety, hallucinations, and suicidal thoughts in the 30 day period prior to each interview. While treatment appears to improve psychiatric stability and reduce associated symptoms across the board, it is clear that Foundations’ consumers have ongoing mental health needs. When looked at in terms of how many days a consumer experiences mental health problems in the month prior to each interview, treatment appears to reduce symptomatic days by approximately 35%. It is also noteworthy that consumers appear to stabilize psychically, maintaining treatment gains even 12 months after intake.

One difficulty in relying upon ASI scores lies in interpreting their severity relative to other treatment populations and, therefore, in understanding their true clinical meaning. The ASI also provides a weak assessment of symptoms in individual symptom domains, including only one direct question on anxiety, for example. For this reason, we chose to supplement the ASI psychiatric measure with the Brief Symptom Inventory and the Personality Assessment Inventory (Schizophrenia subscale).

The Brief Symptom Inventory is a 53-item self-report measure that has proven useful as a clinical and research tool, and has been used widely in mental health assessment applications.
One significant benefit of using the BSI is that scores may be standardized in terms of clinical or census-based normative groups, allowing one to accurately gauge the relative severity of BSI scale scores. For the purposes of this analysis, BSI scale scores will be calculated using norms provided for psychiatric outpatients (inpatient norms are available, but they are not as psychometrically stable and results are nearly identical). BSI scale scores for 4 key outcome domains are shown below:

**BSI Scale Scores at Baseline, 6 Months, & 12 Months**

<table>
<thead>
<tr>
<th>Percentile Score (BSI Outpatient)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
</tr>
<tr>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depression</th>
<th>Anxiety</th>
<th>Psychosis</th>
<th>Global Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSI Domain</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>6 Months</td>
<td>12 Months</td>
<td></td>
</tr>
</tbody>
</table>

Results from analyses of key BSI domains provide further support for findings from the Addiction Severity Index. Consumers report substantial reductions in psychiatric symptomatology following treatment in Foundations’ residential program in all key symptom domains and remain stable even 12-months later. At program intake, Foundations’ consumers report a very high level of symptomatology, as the average Foundations consumer is experiencing psychiatric symptoms more severe than 75% of persons receiving outpatient psychiatric services. After treatment, the average Foundations consumer report less psychiatric impairment than the average person receiving outpatient mental health services.
This supports Foundations effectiveness in achieving a second major goal of integrated treatment: to reduce psychiatric symptomatology.

**Medical Problems**

Oddly enough, the ASI Medical composite score shows an increase in severity following treatment. This is a puzzling finding because that it does not correspond with every other indicator of program effectiveness, which show remarkable uniformity across the board. As mentioned earlier, the ASI medical composite score comprises only 3 items and is therefore the ASI domain most susceptible to influence by outlying scores on single items. In order to examine this phenomenon more closely, results from each ASI medical domain item are presented here:

<table>
<thead>
<tr>
<th>Days of Medical Problems at Baseline, 6 Months, &amp; 12 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>16.0</td>
</tr>
<tr>
<td>14.0</td>
</tr>
<tr>
<td>12.0</td>
</tr>
<tr>
<td>10.0</td>
</tr>
<tr>
<td>8.0</td>
</tr>
<tr>
<td>6.0 (of last 30)</td>
</tr>
<tr>
<td>4.0</td>
</tr>
<tr>
<td>2.0</td>
</tr>
<tr>
<td>0.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Days of Medical Problems at Baseline, 6 Months, &amp; 12 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>Medical Problems</td>
</tr>
</tbody>
</table>

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How bothered are you by Medical Problems?

Extremely
Moderately
Severity

Slightly

Not At All
Medical Problems
Baseline  6 Months  12 Months

**How important is treatment for Medical Problems?**

Extremely

Considerably

Moderately
Severity

Slightly

Not At All
Medical Problems
Baseline  6 Months  12 Months

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On the three ASI items used in calculation of the composite score, there is a consistent pattern of increasing concern regarding physical health problems. Since the ASI does not provide sufficient detail to describe the nature of physical complaints, nor any rationale for their increasing severity, the cause of this trend is unclear.
Given the overall trend of results across all domains, however, it is likely that this subjective increase in medical problems has a sensible explanation. One might speculate that consumers prioritize issues related to substance use and mental health treatment at the initial intake interview, thus minimizing subjective physical complaints at baseline. It is also possible that this trend represents an inevitable decline in physical health over time, or that the program assists consumers in identifying and addressing physical health concerns. Because physical health was not a priority measurement domain in the evaluation plan, it is difficult to do more than speculate regarding the cause.

There are, however, two additional evaluation items that may shed some light on this question. First, the GPRA includes a global rating of health, which shows a modest improvement in subjective ratings of health status. Of course “overall” health is a broader measure than described in the ASI medical domain, but this documents another inconsistency with the ASI medical composite score.

### How would you rate your overall health?

<table>
<thead>
<tr>
<th>Rating</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td></td>
</tr>
<tr>
<td>Very Good</td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td></td>
</tr>
<tr>
<td>Fair</td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td></td>
</tr>
</tbody>
</table>

#### Overall Health

<table>
<thead>
<tr>
<th>Time</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td></td>
</tr>
<tr>
<td>6 Months</td>
<td></td>
</tr>
<tr>
<td>12 Months</td>
<td></td>
</tr>
</tbody>
</table>

In addition to the measure of overall health, the GPRA includes a global measure of service utilization related to physical health problems. This is perhaps the strongest argument that the increase in the ASI medical composite represents a growing awareness of and increasing focus on physical health problems.
<table>
<thead>
<tr>
<th></th>
<th>Inpatient</th>
<th>Outpatient</th>
<th>Emergency Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Type</td>
<td>Baseline</td>
<td>6 Months</td>
<td>12 Months</td>
</tr>
</tbody>
</table>

As shown in the figure, outpatient services for physical health problems increase substantially 6 and 12 months after program intake, though inpatient and emergency room services decline. This represents a shift in service profile, from a crisis-based, high intensity (and high cost) profile, to a need-based, lower intensity (and lower cost) profile. It does document, however, a substantial increase in utilization of outpatient services for physical health needs following treatment.

**Employment/Income**

Unlike the ASI medical domain, the ASI employment domain shows an expected improvement in employment outcomes following integrated treatment at Foundations. Employment is a key program outcome because it represents an important threshold for functional improvement and rehabilitation. Selected employment outcomes are shown in the following figures:
While the ASI employment domain score shows a significant increase in employment following treatment (with a moderate effect size), perhaps it is easier to understand these results in terms of the percentage of consumers who worked before and after treatment. While only 22% reported receiving any income from employment prior to treatment, 53%
Another way to look at employment is by examining total income, of which employment is a key component. Income due to employment also shows a substantial increase, nearly tripling by the end of one year. In terms of total income, however, this increase is offset by a decrease in reliance upon family and friends for money, and in a decrease in income from illegal activities. It should be remembered that income is a highly volatile outcome variable due to the extreme disparities often observed in individual income. This is highly apparent in the 6 month income value for illegal income, which shows little decrease from baseline. This appears puzzling at first inspection, but a closer investigation reveals that this is due almost entirely to the activities of one individual who reported in excess of $10,000 in monthly income at 6 months.

### Income in Last Month

<table>
<thead>
<tr>
<th>Dollars (last 30 days)</th>
<th>$300</th>
<th>$200</th>
<th>$100</th>
<th>$0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Income</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disability</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family/Friends</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illegal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Months</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 Months</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**Legal Problems**

Another key ASI outcome domain concerns legal problems. As documented previously, a
substantial percentage of Foundations’ consumers have a history of criminal activity and legal involvement. Since much of this activity is directly related to drug use and its related lifestyle, one would expect to see a reduction in criminal justice problems following treatment. This is a complex variable, however, because consumers may often enter treatment after an encounter with legal authorities but before prosecution. This means that offenses committed prior to treatment may appear to be prosecutions after treatment, complicating our understanding of treatment effectiveness. Due to this, one would expect to see a more gradual decline in overall legal problems following treatment (when variables such as prosecutions are counted).

Results from the ASI legal domain indeed show a statistically significant, though gradual decline in the severity of legal problems following treatment at Foundations. In order to more accurately gauge the effectiveness of integrated treatment in reducing criminal activity, however, it is more important to examine evidence of new criminal activity, such as new arrests (which may not necessarily result in convictions) and participation in illegal activities. The ASI and GPRA have two useful indicators of current illegal activity, shown in the following figure.
As expected, reports of arrests and criminal involvement decline significantly following treatment at Foundations. It should be recognized, however, that self report information on criminal activity is notoriously difficult to obtain accurately. It is likely that both pre-treatment and post-treatment estimates of criminal involvement underrepresent the true extent of legal involvement, despite all efforts by the program and evaluation to ensure confidentiality in reporting such activity.

**Family Problems**

Another key outcome of this evaluation relates to family and social functioning. The ASI family and social domain provides one of the more comprehensive measures within the ASI, and shows significant improvement in family and social functioning following treatment. While the ASI composite measure documents significant improvement in the global family and social domain (with a medium effect size), it does not show where most treatment gains are made. To better show the effects on family versus other social relationships, two ASI items from the composite score are shown to describe the extent of family concerns versus other social concerns.
<table>
<thead>
<tr>
<th>Severity</th>
<th>0.4</th>
<th>0.3</th>
<th>0.2</th>
<th>Composite Score</th>
<th>0.1</th>
<th>0.0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Family/Social</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Baseline</td>
<td>6 Months</td>
<td>12 Months</td>
</tr>
</tbody>
</table>

**How bothered are you by Family and Social Problems?**

<table>
<thead>
<tr>
<th>Severity</th>
<th>Baseline</th>
<th>6 Months</th>
<th>12 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extreme</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Considerable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderately</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slightly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not At All</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Family Problems**

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>6 Months</th>
<th>12 Months</th>
</tr>
</thead>
</table>

**Social Problems**

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>6 Months</th>
<th>12 Months</th>
</tr>
</thead>
</table>

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**Targeted Capacity Expansion Grant - Project End Report**

**Serious Family and Social Conflict**
While these items should not be given the interpretive importance that the ASI family and social domain score carries (because it comprises many items), these findings do suggest that improvements in family and social functioning are fairly general. While the improvement in family functioning appears to be fairly stable at 6 and 12 months, there appears to be a slight decrease in satisfaction with social relationships at the 12 month assessment. The nature of this is unclear and insufficient data exist to enable any substantive interpretations. While this may represent deterioration in social functioning after 12 months, one would expect to see a comparable decrease in other social realms, and that is not apparent. If this pattern continues in future evaluation work, it may warrant closer investigation.

**Service Utilization**

Given the extensive histories of prior treatment reported by most Foundations consumers (i.e., an average of more than 10 lifetime hospitalizations related to substance use or mental health problems), one of the more significant programmatic effects would be expected in the outcome of service utilization. Items from the GPRA measure were used to assess program impact on consumers’ use of inpatient, outpatient, and emergency room services related to physical health, substance use, and mental health problems. Results are shown in the following figures:
Percentage Accessing Services

<table>
<thead>
<tr>
<th></th>
<th>Inpatient</th>
<th>Outpatient</th>
<th>Emergency Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Type</td>
<td>Baseline</td>
<td>6 Months</td>
<td>12 Months</td>
</tr>
</tbody>
</table>

Service Utilization Related to Mental Health Problems

<table>
<thead>
<tr>
<th></th>
<th>Inpatient</th>
<th>Outpatient</th>
<th>Emergency Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Type</td>
<td>Baseline</td>
<td>6 Months</td>
<td>12 Months</td>
</tr>
</tbody>
</table>

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### Service Utilization Related to Substance Use

<table>
<thead>
<tr>
<th>Percentage Accessing Services</th>
<th>Inpatient</th>
<th>Outpatient</th>
<th>Emergency Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>5%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Baseline</th>
<th>6 Months</th>
<th>12 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outpatient</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency Room</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Outpatient and Self Help Services for Substance Use

<table>
<thead>
<tr>
<th>Percentage Accessing Services</th>
<th>Outpatient (agency based)</th>
<th>Outpatient and/or Self Help (DRA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Baseline</th>
<th>6 Months</th>
<th>12 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outpatient</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self Help</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
These results show a remarkable decrease in high intensity inpatient and emergency room service utilization following treatment at Foundations. For physical and mental health problems, there is a corresponding increase in outpatient service utilization. Outpatient service utilization related to substance use problems appears to be relatively stable following treatment, in large part due to the reliance on community based self-help treatment options. This finding has substantial implications for system design and policymaking with respect to integrated services. These figures provide a clear implication that crisis-based patterns of service use frequently observed in this high-need, highly resource intensive service population can be transitioned to less-intensive, less-costly models of care with an intervention appropriate to their specific needs.

Of all key study outcomes, this is perhaps the most striking evidence of Foundations’ effectiveness in integrating substance use and mental health treatment services. As detailed earlier, most consumers entering Foundations’ treatment program have a long history of treatment in the traditional, single-focused, substance abuse and mental health treatment systems. While treatment does not always work the first time, it is important to recognize that Foundations’ consumers are among the most challenging, most treatment-resistant (as evidenced by the failure of previous treatments), and most-costly individuals in the healthcare system, including physical healthcare costs (Jeffrey Buck, CMHS, 2001). This is clearly established in the baseline data.

Despite this challenging clientele, Foundations integrated model shows significant success with a large number of these consumers, resulting in significantly reduced substance use and mental health symptomatology, improved employment and income, and improved social functioning. Gains acquired following treatment generally appear to sustain or improve with the passage of time. Qualitative information collected from Foundations’ consumers support the objective evidence, suggesting that many consumer perceive a meaningful difference between their treatment experience at Foundations and their many previous treatment experiences. They describe this difference as an unwavering focus on treating both substance abuse and mental health problems simultaneously, in an integrated fashion. As obvious as it may now seem, many consumers report that this is the first time, with an average of more than 10 treatment episodes apiece, they ever understood the relation between their substance use and their mental illness. That simple concept then becomes the basis for creating a sustainable plan for long-term recovery.

While this evaluation provides strong evidence of the effectiveness of Foundations’ integrated residential treatment model for this population, it will be important in the future to move beyond
simple measurement of treatment outcomes to a better understanding of treatment process, including rich information on the services provided, clinician ratings of clinical progress, consumer engagement, and operationalization of integrated principles and concepts.

**Conclusion**

In Foundations’ initial years, founder Michael Cartwright and his clinical staff reviewed the existing literature on residential models for co-occurring disorders. Unlike many traditional modes of substance abuse or mental health intervention, there were no well-established integrated residential program models upon which to draw. The staff at Foundations reviewed the broad philosophical principles articulated by experts in the field (Minkoff; Drake & Mueser, and others, now summarized in the 1998 CMHS Consensus Panel Report). The challenge for the program was how to translate those general principles into action. Including identification of staff qualifications, curriculum requirements, methods for ensuring staff adopted integrated principles, staff training procedures, determinations of length of stay, criteria for transitioning consumers from one level of care to the next, decisions about which clinical factors defined eligibility for integrated services, and methodologies for initial and ongoing assessments. From this process, we learned that essential elements to integration must rely on a combination of the following core elements:

- Continuous cross-training of both professional and non-professional staff in the treatment of co-occurring disorders.

- Adaptation of motivational enhancement concepts as a basis for treatment philosophy throughout all activities.

- Provision of treatment that is appropriate and sensitive across culture, ethnicity, and gender.

- Adoption of a long-term perspective that provides appropriate assessment and treatment across all phases of recovery and relapse.

- A strong therapeutic alliance to foster patient engagement in the treatment process, consistency in treatment, and positive treatment outcomes.

- Group based interventions as a key method of enhancing recovery activities and providing forum for peer support, psychoeducation, and self help activities.
- A side by side approach to life skills training, education, and support that addressed training with, rather than to, the consumer.

- Case management to attend to the range of clinical, housing, social or other needs by providing services directly to the community.

- A belief and communication of optimism regarding a “hope in recovery” perspective by staff across all levels.

Many practical questions required answers in order to develop a fully integrated program. At the program initiation, there were no easily accessible residential models upon which to build. In the intervening years, now several examples exist of residential programs with proven effectiveness. It is our hope that Foundations’ experience can inform other programs poised to make the leap from principle to practice, while leaving room for programs to tailoring specific treatment elements to the needs of their consumer population.