

Community Treatment of Extremely Troublesome Youth with Dual  
Mental Health/Mental Retardation Diagnoses: A Data Based Case Study

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Abstract

This report describes a data based case study of a linked array of community based treatment services that appears to have been effective for extremely troublesome dual diagnosed children and adolescents. Hallmarks believed to be relevant to the successes achieved are described, followed by long-term data supporting treatment effectiveness. This report provides apparent support at the data based case study level for applied research, and presents a simple evaluation strategy that can be used in clinical settings.

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As human services continue to evolve from institutional models of care to community based and managed care models, there is an increasing need for documentation of effective community based services for children and adolescents with both developmental disabilities and mental health

diagnoses, and the most challenging problems (Mason, Galvin, & Basford, 1998; Small, Kennedy, & Bender, 1991). There is a growing body of literature confirming that children and adolescents entering out-of-home care now are more disturbed than in the past (Dore, 1999; Hochstadt, Jaudes, Zimo, & Schachater, 1987; Knitzer, 1989; McIntyre & Keesler, 1986; Urquiza, Wirtz, Peterson, & Singer, 1994). These youth place great demands on community based services, and evidence based models of effective service delivery are needed.

It has been suggested that research is extremely difficult to accomplish in community based clinical programs (Mason et al., 1998; Scotti, Ujcich, Weigle, Holland, & Kirk, 1996; Stein, 1995). The clients present widely differing needs and the demands on staff are intense and variable, making it difficult to hold critical variables constant while systematically varying others. However, applied research in more controlled settings does suggest what ought to constitute best practice in community based clinical settings. It has been suggested that the most effective interventions for youths can be provided by the adults who live and interact with the youths in the context of their everyday lives (Durrant, 1993; Hobbs, 1982). A number of researchers also have suggested that functional analysis, or functional assessment, provides a model for identifying effective interventions (Carr et al., 1999; Gable, 1996; Horner, 1994; Horner & Carr, 1997; Kemp & Carr, 1995). Data based case studies from clinical settings can provide a bridge between rigorous applied research and everyday clinical settings by providing some validation of the more formal research as well as suggesting promising directions for future research.

The purpose of the present report is to present a data based case study using a simple program evaluation strategy that suggests the effectiveness of a community based clinical program serving very challenging children and adolescents with a wide variety of problems. The clinical components of the program outlined below were adopted and adapted from promising practices reported in the applied research literature.

Program Description

Participants

The participants included 15 boys and 3 girls with dual mental retardation and mental health diagnoses, referred for out-of-home

placements due to the severity of their behavior. Table 1 lists their ages, IQ scores when reported, diagnoses given in admission documents, and primary presenting problems. At the time of admission the youths ranged in age from 4 to 17 years with a median age of 12 years. Since IQ scores were not a requirement for admission, only diagnoses of mental retardation were available for some youths. For the remaining youths IQ scores fell in the profound range (low of 16) to the mild range (high of 71) of mental retardation with the median in the moderate range. Diagnoses at admission included attention deficit/hyperactivity disorder, autism/pervasive developmental disorder, bipolar disorder, oppositional defiance disorder, post traumatic shock disorder, schizoaffective disorder, and trichotillomania. The behavioral challenges presented by the youths at the time of admission included feces smearing, physical aggression towards people and/or objects, risky and/or dangerous behavior such as bolting into traffic or eloping to dangerous locales, self-injurious behavior, and sleep disturbances to name a few. All but one of the youths had been placed in inpatient psychiatric hospital settings in the 12 months prior to admission due to the severity of their problems. All had been placed in different out of home placements anywhere from once to 13 times during the three years prior to admission. All of the youths were receiving from two to four psychotropic medications at the time of referral. Locally, they were considered to be the most challenging children to serve in community settings and were actively engaging in the challenging behaviors noted here. In fact, at the time of referral, no other community based service options could be identified for these youths. Placement needs were established by interdisciplinary teams and were voluntary admissions with informed consent provided by legal guardians.

At the time of placement the participants also were assigned to new educational placements by the school district responsible for the education of students admitted to the program. Ten youths initially were placed in a public segregated special education school exclusively for children with mental retardation. Of those youths, 5 were eventually placed in a private segregated special education/partial hospitalization facility for youths with behavioral challenges along with the other children included in this study.

Table 1  
Participant Characteristics at Admission

Youth	Age	IQ	Diagnoses	Referral Problems
A	8	N/A	Autism, moderate mental retardation	Aggression, autism, sleep disturbance, rituals
B	11	N/A	Atypical organic brain syndrome, oppositional defiant disorder, mild mental retardation	Self-injurious behavior
C	12	N/A	Infantile autism, ADHD, moderate mental retardation	Aggression, bolting, hyperactivity, autism, feces smearing
D	13	40	Organic personality disorder, atypical pervasive developmental disorder, language disorder - expressive & receptive	Fire setting, urination, destruction
E	12	43	ADHD, oppositional defiant disorder, pervasive developmental disorder, developmental language disorder - expressive & receptive	Aggression, bizarre talk
F	14	24	ADHD, infantile autism, athymic disorder	Aggression
G	8	N/A	Autism	Aggression, self-injurious behavior
H	7	29	ADHD, oppositional defiant disorder, pica, autism	Aggression, bolting, pica, hyperactivity, feces smearing, sleep disturbance
I	8	57	Pervasive developmental disorder	Aggression
J	7	36	ADHD, oppositional defiant disorder, seizure disorder, r/o organic brain syndrome atypical	Difficult to manage
K	7	29	ADHD, oppositional	Aggression, bolting, pica,

			defiant disorder, pica, autism	hyperactivity, feces smearing, sleep disturbance
L	4	N/A	Oppositional defiant disorder r/o ADHD, trichotillomania, pervasive developmental disorder, moderate mental retardation, autism	Self-injurious behavior, excessive crying
M	13	N/A	Post traumatic stress disorder, Tourettes syndrome, tic disorder, organic mental disorder, pervasive developmental disorder NOS, mild mental retardation	Aggression, stealing
N	13	49	Bipolar disorder, multiple personality, post traumatic shock disorder, pervasive developmental disorder	Hospital step down, excessive fears
O	17	N/A	Conduct disorder, atypical psychosis, borderline intellectual functioning	Aggression, suicidal ideation/threats/attempts
P	13	16	Oppositional defiant disorder, organic mental disorder, angelman syndrome, seizure disorder	Not walking, aggression, stealing
Q	16	71	Schizophrenia, schizo-affective disorder, post traumatic stress disorder, mixed developmental disorder	Aggression, fire setting, elopement, life threatening acts
R	16	36	ADHD, seizure disorder, pervasive developmental disorder	Difficult to manage

N/A = IQ score was not available at admission.

### Program

The program consisted of a linked array of services (Fabry, 1999). The array included a residential program as the most restrictive component of the array, a therapeutic foster care program as another component, and family and community based wraparound services (VanDenBerg & Grealish, 1996) as the third component of the array. The services were linked together by a single clinical management team which provided training, clinical supervision, and management for all three components. The link between service components was further strengthened by arranging for a clinical supervisor to remain assigned to a youth as the youth moved from one component of the array to another. The supervisor also served as the liaison to a youth's educational program.

All of the children included in this report were initially admitted to the residential component and, over time, moved to the other, less restrictive components as therapeutic foster parents and/or biological families were willing and able to take the youths into their homes. The initial admission to the residential component was considered the appropriate level of service by an interdisciplinary treatment team due to the severity and level of risk of the youths' behavior at the time of admission; it was not a program requirement.

There were a few critical characteristics that served as hallmarks for the program and were used as guiding principles for program design, clinical decision-making, staff training and policy development. Each program component of the service array is described in the context of these hallmarks. There were six hallmarks: a no reject, no eject policy, small group living situations, para-professional model, relationship development, positive approaches to treatment and a multicontextual approach.

No reject, no eject policy. The first hallmark consisted of a policy of accepting all referrals on the assumption that the youths in need of the services were challenging to serve and did not fit into any alternative service option (Dennis, 1992). Any youth referred was accepted regardless of age, sex, diagnoses, or presenting problems. Once admitted, program policy was to not discharge youths under negative circumstances regardless of the severity of their actions. Most of the youths had already been through multiple placements and the program made a commitment to stick with the

youths and go all out to find effective individualized solutions (cf., Berkman & Meyer, 1988). On the few occasions when it was deemed clinically necessary to admit a youth to a psychiatric hospital, the program staff maintained contact with the youth and brought the youth back to the program upon discharge from the hospital.

Small group living situations. Research suggests that when youths are treated in groups of six or more for problem behavior there is the danger that the peer group will engage in deviant training, and the youths will be worse off as a result of their group treatment (Dishion, McCord, & Poulin, 1999). The authors' experiences also suggested that extremely challenging youth did better in small group settings for additional reasons. The adults serving as treatment agents could provide more individual attention and could get to know and understand youths better when only one or two troubled youths lived in the same setting as compared to 8 to 12 youths living in one home. Therefore, a second hallmark that guided program development across the array of services was "small group situations."

Small groups were achieved in the residential component by choosing housing options that were designed for single families. Four houses located within 200 yards of each other in a residential neighborhood were chosen. Two of the houses were single-family units, while the other two were duplex houses, each containing two single-family units. To adhere to the small group hallmark, each living unit was set up for no more than two children. This configuration resulted in a total of 6 living units for no more than 12 youths at a time.

The small group hallmark was achieved in the therapeutic foster care component by limiting each foster family to one foster child at a time.

For the community-based wraparound component, youths lived at home with their natural families. Staff that was assigned provided clinical interventions for a child and his or her family at a 1:1 ratio. The number of staff contact hours with a youth was individually determined in consultation with each youth's family, and ranged from 30 to 75 hours per week.

Para-professional model. A third hallmark of the program was a para-professional model of service delivery. According to this model, treatment is likely to be most effective when it occurs during the day-to-day activities of living in contrast to time limited "treatment sessions" that occur in special training/therapy spaces with masters and doctoral level therapists. The people living with children – direct care staff, foster parents and natural

parents – are believed to be the most critical treatment agents, and clinical expertise is provided through consultation to those treatment agents (Durrant, 1993; Hawkins, Meadowcroft, Trout & Luster, 1985; Hobbs, 1982; Phillips, Phillips, Fixsen & Wolf, 1974). To actualize this hallmark, the residential component was staffed by live-in teacher/counselors (Hobbs, 1982) who were responsible for providing therapeutic interactions in the context of living with and parenting the youths (Phillips et al., 1974). Each teacher/counselor was assigned to one of the residential living units as well as the two youths living in the unit for a four-day on, three-day off shift. The teacher/counselors were responsible for all household chores and for caring for the youths. They played with the youths, assisted them with daily living skills, monitored their interactions with other youths, took them shopping, out to eat, to community events, and to visit other people. This context of daily living provided frequent opportunities for the teacher/counselors to conduct functional assessments and model, coach and teach desired skills. The six residential living units could accommodate up to 12 youths, and there were eight teacher/ counselors on duty at any given time. Most of the teacher-counselors had recently earned bachelors degrees in psychology, social work, or special education. A few others had recently earned masters degrees in psychology. However, none of these staff had prior clinical experience and this was their first job in human services.

Families were recruited to serve as therapeutic foster families (Hawkins, Meadowcroft, Trout, & Luster, 1985; Meadowcroft & Trout, 1990) and were required to complete 25 hours of pre-service didactic training plus six hours of direct contact with the children living in the residential component. Any family completing the pre-service requirements was eligible for service. The families were diverse with most having raised at least one child and one member having been employed previously by other service providers to care for people with different kinds of disabilities. Each foster family also was required to meet basic state mandated regulatory requirements for the condition of their homes. Once a family met all requirements the family could request that a youth the family met during the direct contact time at the residential sites be placed with the family. If the youth's natural family and the program management team concurred, a transition plan to the foster family's home was developed and implemented.

The home and community based wraparound services were provided by teacher/counselors with characteristics similar to the residential teacher/counselors. By regulation these teacher/counselors were required to have at least one year of prior experience working directly with troubled and troubling children and adolescents.

The teacher/counselors and therapeutic foster families were considered the primary treatment agents, and were supported by a variety of expert clinicians who were asked to take on training and consultation roles rather than direct therapy/service roles. The expert clinicians included Ph.D. and M.A. level psychologists with behavior analysis training, a psychiatrist, and occasionally other specialists in speech and hearing, drug and alcohol, sexual abuse/offense, autism, and person centered planning.

Relationship development. Another hallmark of the program was an emphasis on relationship development as a clinical intervention. The teacher/counselors and therapeutic foster families were encouraged to develop positive personal relationships with the youths for three reasons. First, given that many of the youths had communication difficulties in addition to extremely troublesome behaviors, it was believed that a close relationship with a youth would help an adult better understand the youth's expression of needs and learning style, help the adult better learn how to communicate with the youth, and facilitate functional assessment. Second, it was believed that a positive, consistent relationship in and of itself might ameliorate a youth's need to engage in troublesome behaviors (Applegate & Barol, 1989). Third, a positive relationship was believed necessary to increase the effectiveness of an adult's therapeutic teaching interactions with the youth (Ballantyne, MacDonald, & Raymond, 1998; Willner et al., 1974).

Relationship development was facilitated by frequent one-to-one interactions made possible by living with the youths in the small group living arrangements, and by requiring the teacher/counselors and therapeutic foster families to include the youths in all activities of daily living including fun activities such as recreational outings. Teacher/counselors and foster parents also were taught to use specific interpersonal skills found to be liked by youths (Willner et al., 1977). Other interpersonal skills often cited in the clinical literature such as engaging in empathy, concern, positive affection, counseling, respect, and trust

(Cormier, Hackney & Cormier, 1998) were taught to the teacher/counselors and foster parents.

The four hallmarks presented thus far were established when the program was initially developed. The next two hallmarks, positive approaches to treatment and a multicontextual approach, also were identified at start up, but evolved in sophistication over time as new literature and national conferences became available.

Positive approaches to treatment. Another hallmark of the program was routine, ongoing training in positive approaches to treatment. All teacher/counselors and therapeutic foster parents were required to complete a training curriculum developed from the research literature cited in this report, and included professionalism skills, attitudes and values (Carr & Durand, 1987; Wolfensberger, Nirje, Olshansky, Perske, & Roos, 1972), positive approaches (Berkman & Meyer, 1988; Carr, Robinson, Taylor, & Carlson, 1990; Horner et al., 1990; Mental Retardation Bulletin, 1991; Pitonyak, 1990), relationship development skills, assessment skills, and treatment/teaching skills (Carr, Robinson, Taylor, & Carlson, 1990; Dowd, Czyz, O'Kane, & Elofson, A, 1994; Gordon, 1970; James et al., 1983; O'Neill, Horner, Albin, Storey, & Sprague, 1990; Phillips, et al, 1974; Risley, 1995). Each staff person participated in weekly training seminars of two to four hours, which were conducted by the clinical experts mentioned previously. Training never ended. New staff went through a basic yearlong cycle and then joined the more senior staff that continued to experience weekly training seminars that expanded on or approached the same topics from different perspectives. The research literature and training manuals cited here were used as the basis for the training. The foster parents participated in monthly training sessions that lasted three hours at a time.

The purpose of the attitudes and values training was to reframe common misperceptions about people with mental retardation and mental health disorders. General themes included treating people with respect and dignity, creating everyday lives and personal futures (O'Brien & Lovett, 1993), thinking about people as being able to learn and change in contrast to being disabled and unable to change, and to recognize that the actions of people with disabilities and mental health diagnoses are functional for them. The relationship development component stressed the value of relationships to the quality of one's life, the therapeutic value of positive relationships, and skills considered central to building relationships. The assessment

component focused on how to conduct functional assessments and functional analyses of troublesome behavior. The treatment component attempted to frame treatment as teaching, with the teaching techniques adopted and adapted from the Teaching Family model (Dowd, Czyz, O’Kane, & Elofson, 1994; Phillips et al. 1974). “Treatment is Teaching” was one of the program’s slogans. The overall goal was for the adults functioning as treatment agents to develop positive, supportive relationships, and engage in ongoing functional assessments and analyses of troublesome actions to identify acceptable functionally equivalent skills that then were taught to each child (Carr, 1988).

Multicontextual approach. A multicontextual approach, the last hallmark, assumes that any troublesome behavior is part of a psychosocial phenomenon, influenced by the interaction among biological, cognitive, and social and nonsocial environmental domains. Gardner (1996) describes a multicontextual behavior analytic model that takes these domains into consideration, and suggests that the behavior analysis model of functional analysis can be extended to analyze all of these domains. The staff was trained by the program’s clinical experts to conduct functional assessments and functional analyses that included environmental events as well as consideration of establishing operations (Michael, 1993) of biological origin (e.g., a headache), psychiatric disorders of a biological origin (e.g., bipolar disorder), and complex social interactions (e.g., a child engaging in aggressive behavior following the failure of non-oral communication efforts to get a need met) (Fabry, 2000).

In response to increased use of newer psychotropic medications, the para-professional treatment staff was trained to work collaboratively with each child’s psychiatrist. The role of staff was to collect information and organize it for presentation to the psychiatrist to aid in the ongoing diagnostic process relative to mental health disorders that could be treated effectively with psychotropic medications (Ryan & Sunada, 1994). The overall goal was to use a functional analysis approach to assessment of medication effects, and to work in collaboration with the psychiatrist to reduce the use of psychotropic medications to only those cases where a clear diagnosis could be made and treated with psychotropic medication according to best practice.

### Case example

The following case example is provided to illustrate implementation of the program hallmarks. One youth (B in the table and figure) was admitted to the residential program with severe self-injurious behavior, most often taking the form of head banging. During the three years prior to admission, he had spent 90 days in an inpatient setting during the first year, 30 days during the second year, and 206 days during the year just prior to admission. While in those settings he had experienced multiple “behavior modification interventions” with no documented success. When not in inpatient settings he was moved among different family and extended family members’ homes, lasting in each home until the family members were no longer able to cope with his self-injurious behavior.

The no reject, no eject hallmark was demonstrated by accepting this youth with severe self-injurious behavior that had not been resolved in other settings, and continuing to serve the youth while effective interventions were discovered.

The positive approaches to treatment hallmark was demonstrated through repeated efforts to conduct functional analyses and develop supportive interventions based on the analyses. The staff discovered that the youth’s self-injurious behavior appeared to be a function of novel or physically close social interactions. Anytime an unfamiliar or unexpected person came into the same room he would engage in self-injurious behavior until the person left. When a social situation included a group of people, he would engage in self-injurious behavior until they or he could move a distance back, or the number of people in the group decreased.

Treatment involved supportive and teaching components, plus a psychotropic component. For the supportive component, every effort was made to keep staff consistent from day to day. Eventually he moved into a foster family setting where “staff consistency” was an inherent characteristic of family life. For the teaching component of treatment, he was taught to tell people about how he was feeling and given control over how he entered a group. He also was encouraged to engage in social interactions with staff support and coaching.

The small group living situation hallmark combined with the relationship development hallmark seemed to particularly benefit this youth given the outcome of the ongoing functional analyses. It would have been difficult to regulate social interactions as this youth seemed to need in large

group settings. In addition, it was possible to observe that the self-injurious behavior was much more likely to occur in group situations, or when “strangers” entered the environment in contrast to when the youth was alone with a familiar staff person and one other youth.

The para-professional model was demonstrated to the extent that the teacher/counselors and therapeutic foster parents living with the youth were able to observe the youth in a variety of daily living situations and, by following functional assessment strategies under the direction of the expert clinical staff, identify the critical functional relationships between social interactions and his self-injurious behavior. Those functional relationships had not previously been identified during previous inpatient stays.

Lastly, the multicontextual hallmark was demonstrated through the psychotropic medication trials. Various psychotropic medications trials were conducted until one, paroxetine hydrochloride (Paxil), was eventually identified as therapeutic.

During the three years following his admission to the program he did not experience any psychiatric inpatient days. In addition, he moved from the residential program to a therapeutic foster home where he has continued to live.

### Outcomes

Hawkins and Hursh (1992) describe a continuum of levels of research. Level 1 research can be defined as accountable service delivery with simple data collected frequently. Level 1 resembles a case study, but guided by the repeated measurement over time rather than by only anecdotal information, as has been the tradition. Level 2 research is semi-scientific evaluation, which includes some comparison condition or group. Level 3 is rigorous scientific-quality research that maximizes and verifies the credibility of data. The data reported in this data based case study fit with the level 2 definition, first by measuring an important clinical outcome over time, and second by collecting comparative data. In this case, a multiple baseline design across youths was used.

External professionals involved with the program either as referral sources or as consultants, and the youths’ families were asked what they considered to be the single most important clinical outcome for the youths. The first and unanimous recommendation was keeping the youths out of

psychiatric inpatient settings. Therefore, a simple yet important clinical outcome, number of days in inpatient psychiatric settings was measured. Local regulations required that reports be written to document each inpatient stay for a youth and include the admission and discharge date. Those reports also were required to be available to the program. Number of inpatient psychiatric days was determined by reviewing all reports and counting the number of days from each admission to each discharge.

Measuring number of inpatient psychiatric days allowed a comparison of the program’s effectiveness with other conditions. For the purposes of this report, it was possible to count the number of inpatient days for each youth for the three years prior to admission to the program, and compare that with the first three years in the array of services offered by the program. In addition, since new youths were admitted to the program each year, it was possible to look at the data in a multiple baseline across youths format.

The results are presented in Figure 1. The figure shows the number of psychiatric inpatient days/year for each youth prior to being admitted to the program (Prior) compared to the number of psychiatric inpatient days/year while being in the program (During). Each line corresponds to a separate youth. The 18 youths were grouped based on the year of admission, and the groups are arranged according to a multiple baseline design across youths.

The baseline conditions were highly variable across the youths. The youths’ records indicated that in the three years prior to admission, the youths were moved from setting to setting in reaction to their challenging behavior. One youth lived in 13 different settings in the three years prior to admission. The settings ranged from the youths’ natural families’ homes, to group homes, to different psychiatric inpatient units, to regional institutions. There were six different psychiatric inpatient units that were used by the youths prior to their admission to the program.

The figure shows that the general trend was an increasing number of inpatient days for 14 out of 18 youths during the three years preceding each youth’s admission to the program. Two other youths had been living in psychiatric hospital settings for most of the preceding three years. On average, the youths had spent 149 days in an inpatient setting the year preceding admission.

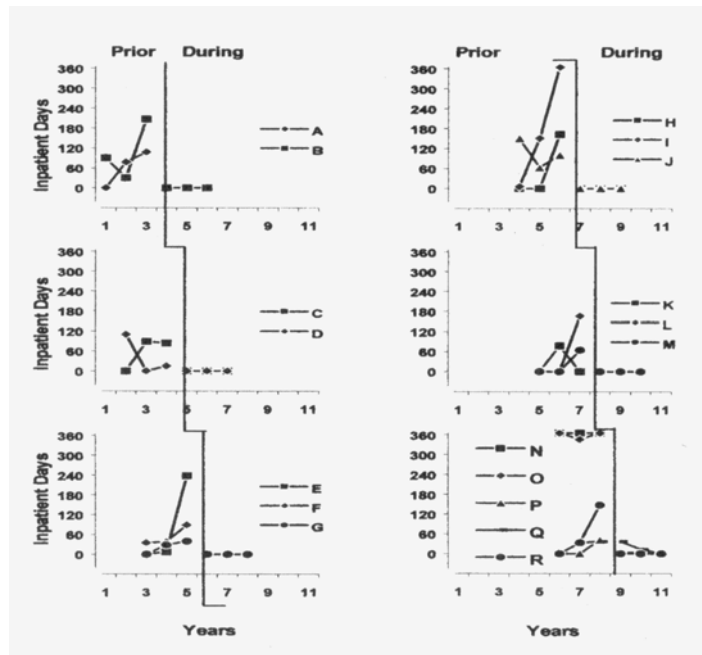


Figure 1. Number of inpatient days per year for the three years prior to the start of treatment services, and the first three years during treatment services.

Once admitted to the program the number of days dropped. The average number of days in inpatient settings was 10 days during the first year of placement. By the third year of placement in the program, the average had dropped to 1 day while the cumulative total days for one adolescent was no higher than 9 days. For a number of youths, the number of days dropped and remained at 0 (in some cases lines for individual youths are hidden because the rate of hospitalization was 0 for all youths included in a given graph).

These data do not directly demonstrate a change in the youth's referral problems leaving open the criticism that the change in number of inpatient days might have been a function of staff behavior rather than youth behavior. For example, an unspoken policy to not hospitalize even when appropriate could have produced the same data. However, there were cases in which the staff did hospitalize youths. Other professionals, educational personnel and the youths' families also were in a position to hospitalize youths had they judged it necessary. Furthermore, the progress of youths moving through the linked service array also supports the outcomes shown in Figure 1. While all of the youths were initially admitted to the residential component, 9 (50%) of the youths eventually moved to therapeutic foster homes and another 3 (17%) eventually moved back home with their own families during the time frame covered by Figure 1.

### Discussion

The purpose of this report was to describe long-term outcomes for a program treating an extremely challenging group of children and adolescents with a wide range of needs and characteristics. There are a number of limitations of the current data based case study design. There are no data presented on treatment fidelity and no data on the participants' daily behaviors. This limits the conclusions that can be drawn from the study. It is not possible to definitively determine if any of the hallmarks were directly responsible for the outcomes reported. Keeping these limitations in mind, the present study seems to provide some support from an everyday clinical setting for interventions that have been demonstrated as effective in more formal research studies. In addition, it suggests some promising directions for future research.

It appeared that the no reject, no eject policy functioned as an establishing operation for staff since the youths presented extremely challenging behavioral problems at admission, and amelioration of the problems was the accepted route to meeting program expectations. The community based small group living situations seemed to provide a context in which change could occur. The youths lived in environments that supported development of pro-social skills by providing normalized experiences along with adults trained to teach, coach and reinforce those skills. This is in contrast to large group residential settings where many

troubled youths live together, modeling and reinforcing each other's undesirable behavior. The relationship development skills, functional analysis approach, and the therapeutic teaching skills appeared to provide staff with clinical skills necessary to achieving change in the youths. The fact that many of the youths successfully transitioned from a residential setting to less restrictive foster care and/or even less restrictive natural family settings with wraparound services suggests that the youths developed more socially acceptable skills. Further research is needed to identify the critical features of these variables that may contribute to therapeutic change. In addition, research on implementation fidelity would help clinicians develop programs in which best practices were not only talked about, but actually occurred.

The outcomes for the participants suggest that a multicontextual functional approach is promising. Others have reported similar success (Carr et al. 1999). Further research is needed to conceptually refine multicontextual functional analyses, identify relevant factors and to clarify the critical steps of analysis.

The relationship development skills used by the staff appeared to be particularly important. In some cases, some of the target behaviors decreased with no explicit intervention occurring other than the staff being asked to focus on developing positive relationships with youths. Further research is needed to identify critical skills involved in relationship development, and to develop a functional description of how relationship skills affect a child's problem behaviors.

Finally, this data based case study suggests a simple evaluation strategy that documents the long-term success of the program in an accountable manner (Fabry, Hawkins, & Luster, 1994). While there are many questions about the relative contributions of different program activities to the changes in the youths' problem behaviors, the results document an important outcome: the youths' problems were no longer so severe as to lead to prolonged stays in psychiatric hospital settings. Less expensive and less restrictive community based options were effective. The daily cost for the residential component stayed at less than 50% of the cost of an inpatient stay over the years covered by this study, and the daily cost of the foster care component stayed at less than 60% of the cost of the residential component. While all challenges to reliability and validity have not been

eliminated, the results are believable as level 2 research (Hawkins & Hursh, 1992).

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