FINAL REPORT

BEHAVIORAL MENTAL HEALTH OUTCOMES OF PSYCHOTHERAPY FOR CHILDREN AND ADOLESCENTS

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This is a collaborative project involving the Connecticut Medicaid Managed Care Council, Department of Social Services and Yale University. The project was designed to answer specific questions of interest to the Department of Social Services. The Project Evaluation Team at Yale University included Alan E. Kazdin (PI), Moira Whitley, Cheryl Pearson, Erica Healey, and Raquelle Kaye. Judith Jordan from the Department of Social Services played a pivotal role in accumulating the measures from clinical services, overseeing communication with the services, and working closely with the Project Evaluation Team. Please address queries to Alan E. Kazdin, Child Study Center, Yale University School of Medicine, 230 South Frontage Road, New Haven, CT 06520-7900 Phone (203) 785-5759 Fax (203) 785-7402 e-mail alan.kazdin@yale.edu

TABLE OF CONTENTS

Project Summary and Findings 1

Background 2

Methods and Procedures 4

Data Analyses and Results 10

Discussion 20

References 27

Tables 28

Appendices

- A. Assessment Forms
- B. Processing Steps Manual
- C. Coding Steps Manual
- D. Coding Forms for Pre and Post
- E. Variable Names and Descriptions
- F. Code Keys
- G. Data Entry Steps Manual

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PROJECT SUMMARY AND FINDINGS

This project examined the mental health services provided to children as part of one of four behavioral health plans in the State of Connecticut. Clinicians completed pretreatment and posttreatment assessment forms to assess multiple characteristics of children and families, services provided, and changes in child functioning over the course of treatment. Completed materials were available for 893 children and families.

Among the key findings: 1) Children demonstrated statistically significant improvement over the course of treatment; 2) The improvements were reflected in global functioning (GAF), as well as reduced impairment in mental, emotional, medical/health, and role performance; 3) The magnitude of the change on the measure of global functioning suggested that the changes were, clinically speaking, relatively small, i.e., children remained within the same category of functioning; 4) Most children received multiple treatments and diverse combinations of treatment, with some form of individual therapy and family therapy as the most common combination; 5) Treatment outcome was influenced by socioeconomic disadvantage of the family as well as severity of initial impairment of the child, with greater disadvantage and severity predicting less improvement; 6) Family involvement in treatment influenced global functioning, impairment, and whether the parents' desired treatment outcomes were met; greater involvement was associated with greater changes in the children at the end of treatment; and 7) The different health plans varied somewhat in the children and families they saw. Even so, there were few differences in treatment outcome that were evident that were associated with the plans whether or not these differences were controlled.

The project provided a portrait of who is seen in treatment, the range of functioning children present, family characteristics, facets of treatment delivery, and the magnitude and scope of the changes that coincide with treatment. The systematic assessment of outcome is important in its own right to permit clarification of the scope of improvements and whether some children are more or less likely to

respond. Recommendations are made for improving assessment that would increase the utility, reliability, and validity of the measures and make assessment more useful to clinicians, services, and health plans.

BACKGROUND

Psychotherapy services for children and adolescents have advanced considerably in the past two decades. Over 1,500 well controlled studies of child and adolescent therapy have been completed.[1,2] Effective treatments have been identified for several problem domains including anxiety, depression, and conduct disorder, to mention a few.[3,4] Although extensive research has been conducted, it is not clear what the effects of treatment are in clinical practice and service delivery. First, children studied in research tend to be less severely impaired than children seen in clinical services. These children, as well as their parents and families, show less dysfunction in multiple domains than those who are referred to clinics. Consequently, it is reasonable to ask if children, as usually seen in clinical services, respond as well as the children included in research.

Second, the treatments studied in research are not those usually used in clinical practice. In research, various forms of well defined and carefully delineated cognitive, behavioral, and family treatments are studied. In service delivery settings, clinicians tend to use more general psychodynamic, relationship, and family based treatments that are much less well specified. Moreover, clinicians tend to combine treatments as they see the need. A given treatment also may vary widely from case to case and clinician. The effects of such treatments in practice are not well known.

Finally, research has made little attempt to identify the types of children and problems likely to respond to treatment. As any form of intervention, whether educational, medical, or psychotherapeutic, not all children and families are likely to respond or to respond very well to treatment, even if that treatment is evidence based. There is a need to identify what treatments are effective with what types of children and families. Matching cases to treatments likely to be effective will improve outcomes and permit more informed decision making about services. In addition, identifying who is not likely to respond can serve as the basis for mobilizing different, innovative, or combined interventions.

Those who deliver services are interested in providing quality care, i.e., interventions that make a difference and that address the problems for which treatment is sought. In this project, the Connecticut Medicaid Managed Care Council sought to examine the effects of treatments provided to children and to explore questions about the factors that might influence treatment outcomes. There was keen interest in identifying whether treatment effects varied as a function of the health plans and interventions, in addition to many characteristics of children and families who are seen in treatment.

The purpose of this project was to examine the outcomes of psychotherapy in clinical work as actually practiced and the factors that influence treatment outcome. This project, conducted under the auspices of The Connecticut Medicaid Managed Care Council, addressed several interrelated questions.

(1.) Do child and family characteristics assessed at intake predict different clinical outcomes? The question focused on severity and scope of child dysfunction as well as parent and family characteristics that might be associated with varied outcomes of treatment.

(2.) Are different types of interventions associated with different clinical outcomes? Diverse interventions are used by clinicians. A wide range of interventions is selected by clinicians to produce therapeutic change. This question addressed whether specific treatments emerge as more effective than others.

(3.) Do different health plans that reimburse outpatient services for the treatment of children influence or contribute to treatment outcome? In the State of Connecticut four Medicaid Health Plans are used to reimburse services and include: Anthem Blue Cross/ Blue Shield, Physicians Health Services, Community Health Network of Connecticut, and Preferred One Health Choice. The project describes the different types of children and families seen by the plans and whether outcomes varied for the different plans.

The questions do not exhaust the areas of interest that served as impetus for the project. Many other characteristics were explored to take advantage of the assessment of children and families before and after treatment. For example, the Connecticut Medicaid Managed Care Council was interested in identifying how often the family was involved in treatment as well as other characteristics of the child, parents, families, and settings that such involvement is associated, and whether involvement influenced outcome. The data provided the opportunity to characterize a subset of children and the services they receive in the State of Connecticut, the changes they may make over the course of treatment, and the factors that influence these changes.

METHODS AND PROCEDURES

Settings and Participants

Characteristics of the sample are detailed in Table 1. By way of overview here, the participants in this project included 893 children ages 1 – 18 (Mean = 10.1), including 471 boys (52.7%) and 380 girls (42.6%). (The sex of 42 cases or 4.7% of the sample was not specified on the assessment forms.) Race and ethnic groupings included children who were: European American (34.0%), Hispanic American (31.8%), African American (24.7%), biracial or of another group (7.5%), and not reported (1.9%). The children were those who were receiving psychotherapeutic services whose treatments were reimbursed by one of four health plans in the State of Connecticut (Anthem Blue Cross/Blue Shield/Blue Care Family Plan, Healthnet [formerly PHS Health Options], Community Health Network, and First Choice/Preferred One. The children participated in one of the following behavioral health companies (Value Options/Consulting Health Care, ProBehavioral Health, Magellan Behavioral Health, and CompCare). Twenty-nine outpatient clinics throughout Connecticut participated in the project. Three that contributed the largest number of cases were the Child Guidance Clinic of Greater Waterbury, Clifford Beers of New Haven, and Village for Families and Children Inc. of Hartford. These three clinics accounted for 48.2% of the sample.

Insert Table 1 Here

The original plan was to obtain pretreatment and posttreatment data for 4,000 to 6,000 children. Ultimately, data were obtained for 893 children who participated in one of the health plans with complete or usable pre and posttreatment data. Services covered by the project were provided from November 1999 through October 2002. Data collected for many other children were not used because either pre or post, but not both, was available or the data were not usable because critical information was omitted. (The number and proportion of unused and unusable cases were not available to the program evaluation team. For most of the project, only complete data sets were sent to Yale University for the evaluation.)

Clinicians were also participants in the project insofar as they completed the measures before (or very early) and after (or toward the end) of treatment. Of the 893 children, 729 (81.6%) were treated by a female clinician; 124 (13.9%) by a male clinician. (Data for sex of the therapist were missing for the remaining 4.5% of the cases.) Many clinicians treated more than one child in the sample of children.

There were 200 different female and 33 different male clinicians in the project. The modal (most common) degree among the therapists was a Masters in Social Work (please see Table 1).

Human Use and Protection of Participant Rights

The participants were children, parents or guardians, and clinicians. Clinicians completed the forms that reflect on characteristics of the children, families, services, and other domains before and after treatment. The clinicians were the only source of data for the project. Confidentiality of the children and families was protected by removing the identity of the individuals in the data collection process, as further described later.

This was a descriptive study rather than an experimental investigation. No participants were assigned to treatments or control conditions as part of this project. The conditions to which all participants were exposed did not differ in any way from their usual clinical care. Pretreatment data were obtained from routine assessments completed by clinicians. These assessments were in place prior to beginning this project. A posttreatment assessment form was added for the purposes of this project. Both pre and posttreatment forms provided the data for this evaluation.

The project fell into a category of a review of records taken from routine application of services to children and families throughout Connecticut. Even so, the project was not entirely risk free. As a large group, conceivably participants could be identified as those participating in a health plan in the State of Connecticut. Those not participating in such a plan were not included. Oversight of the project was conducted to provide an independent evaluation of risks, benefits, and care of client/patient rights.

The project was reviewed annually and approved by the Yale University Human Investigation Committee. The committee oversees research, ethical protection of participants, and compliance with Federal guidelines for research. In addition, In addition, the Office of the Connecticut State Attorney General reviewed the procedures prior to the inception of the project and approved the review of medical records. For both reviews, no consent form was considered necessary for children, parents, or clinicians. Over the course of the project, no untoward side effects were brought to the attention of the Project Evaluation Team during the project.

Assessment

Measures. The assessments include two forms (please see Appendix A) that were completed by the clinicians who provided care. The forms included the Outcome Summary Form and Discharge Summary Form and were designed to be completed on the inception and termination of treatment, respectively. In fact, the point at which they were completed for each case varied. As a rule, measures were completed early in treatment and at the end of treatment.

The initial (pretreatment) form was in place and in ongoing use prior to the inception of this project. The termination (posttreatment) form was developed in conjunction with the Department of Social Services for the purpose of this project. The initial form was sometimes completed during treatment as well and submitted to health plans when additional treatment sessions were requested by the service. In this project, the data were taken from intake and discharge forms only. Information from these forms constituted the primary data. The forms evaluated key constructs of interest and were considered clinically feasible because of their brevity and, in the case of the pretreatment measure, from its routine use.

Assessment Domains. The forms assessed several domains or characteristics of children, families, treatments, and services. Some of the characteristics were assessed either at pre- or post-treatment; other areas were assessed on both occasions. As noted previously, with this project the posttreatment assessment form was added to clinical services. Items and scales were included in the posttreatment form that would permit evaluation of change over time and elaboration of areas that would clarify the sample or inform the results. The post assessment measure was modeled closely in format and duplicated several items to permit pre- and post-treatment comparisons.

Several key domains were assessed and are highlighted here. (Appendix C through F convey the range of variables that were culled from the measures at pre- and post-treatment and how clinician responses were translated into specific variables of interest.) By way of overview, several areas were evaluated. *Child and family subject and demographic characteristics* were evaluated such as age, race, education level of children and parent (or guardian), employment status of the parent, number of adults and children in the home, and several others. *Child symptoms and functioning* were assessed to evaluate psychiatric diagnosis, presence of key symptoms and presenting complaints, areas of strength and impairment (cognitive functioning, role performance), and overall global adaptive functioning of the child, i.e., how well the child is doing in everyday life. *Characteristics of treatment and service delivery* were measured and included items related to the prior history of treatment, use of current medications, the type and number of interventions, and number of treatment sessions provided. Finally *identity of the health plans, behavioral health company, and facility* was recorded.

Outcome Evaluation. Several items on the measures were available to evaluate child functioning and changes that children made over the course of treatment. The primary measure to evaluate change was the clinician rating of Global Assessment of Functioning (GAF). This is a single item rated at pretreatment and posttreatment that spans 1 – 100. Although this is a dimension spanning the full range in one-point units, the scale also is divided into categories in units of 10 to facilitate evaluation. A given category reflects how well the person is functioning on a "hypothetical continuum of mental illness" (p. 32).[5] For example, scores 21 – 30 reflect serious impairment and inability to function in almost all areas, 51 – 60 reflect moderate symptoms or moderate difficulty in social and school functioning, 71 – 80, reflect some mild symptoms or some difficulty in functioning but the individual is functioning pretty well. The GAF score, available at pre and post, served as one outcome measure and is noted here as the primary measure because this is one used broadly in treatment evaluation beyond this specific project.

Other measures were used to evaluate outcome as well. At pre and post, the clinician completed scales to measure four areas of functioning (mental, emotional, medical/health, and role performance). They were rated in two ways, as sources of strength and as areas of impairment (please see forms in Appendix A). In the section of strengths, some of these areas included only one item (yes/no); in the section on impairment, multiple items were included for each area. The psychometric properties (e.g., better scaling from multiple items for a construct, ability to detect change) and the high correlations among the areas when measured as a strength and source of impairment led us to use the impairment scales to reflect change. That is, strength and impairment ratings were redundant (please see Data Analysis section).

Each area of impairment included multiple items that were summed to reflect the following domains: Mental/Cognitive Functioning was a 5-item scale on which clinicians evaluated the child's cognitive functioning (reasoning, orientation, memory, concentration, and thought content). Emotional Functioning included 5 items that reflected psychiatric symptoms (depression, anxiety, elevated mood, irritability, hostility). Medical Functioning and Physical Health included 3 items to reflect functioning in health domains (energy level, appetite, sleep). Finally, Role Performance included 4 items that considered legal issues, finances, relationship, and support. These characteristics of the four functioning scales were included on both intake and discharge forms and constitute 21 items as to whether the area was a strength of the child (yes/no) and if impairment exists, the degree of impairment (low, moderate, and severe). For some of the analyses, a summary measure was formed that consisted of total impairment across the four areas (all 21 items). This is referred to as total impairment summary later in the report.

The five domains GAF and areas of functioning (emotional functioning, mental functioning, medical/health, and role performance or summary of all four domains) were the main outcome measures. Other measures were examined at the end of treatment as well including whether and to what extent DCF was involved in the case at posttreatment, the diagnostic status of the children at the end of treatment, and whether the parent’s goals had been met. These were all measures taken from the clinician-completed measures described previously.

Procedures for Data Collection, Processing, and Tracking

The project included several procedures related to implementation and communication with clinical services throughout the State of Connecticut. These procedures included training of clinicians, communication of the project in various venues, developing a web page, training and feedback to clinicians about the assessment forms, and visits to various services. These were completed by or under the charge of staff at the Department of Social Services. Several individuals were involved; the primary contact of the Program Evaluation Team was with Judith Jordan who spearheaded many facets of the project and whose competent work was evident throughout. The Program Evaluation Team was not involved in the above procedures and do not have full details regarding their execution, time frame, and list of participants. Consequently, procedures related to the project as noted are not included or described here. For the Program Evaluation Team at Yale University, the project began with receipt of completed forms.

Prior to inclusion in the project, the forms were evaluated to determine whether a case was usable or unusable, based on the information and correct completion of the measures. For a case to be included in the study the child needed to be less than 18 years of age, the case needed 4 or fewer sessions when the pretreatment form was completed, 3 or more sessions received at discharge, the Outcome Summary Form and Discharge Summary Form could not be completed at the same time, and the case needed to occur during the established dates of the project.

A significant proportion of pretreatment and posttreatment forms were incomplete and could not be used (e.g., critical demographic information was missing or the measure had no "matched" form to go with the pre or post form that was submitted. In most cases, these forms were returned to the clinic in an effort to obtain completed information. For most of the project, the Project Evaluation Team received forms only for completed cases, i.e., with both pre and post information available. Hence there was no means of identifying what proportion the 893 children represent from the total cases with at least one form.

Once the materials arrived to the program evaluator, each form was given an identification number to ensure anonymity of the child, clinician, and service provider. Each of the forms was entered into a database with the identification number to track cases. (Please see Appendix B for a description of the steps for processing the measures.)

Procedures and manuals were developed by the Project Evaluation Team to guide data collection, tracking, scoring, and coding of forms. The materials are included in the appendices and cover steps for processing the forms, coding responses of clinicians on the forms, tracking, and entering data (please see Appendices B through G). The forms were routinely completed by clinicians and mailed to behavioral health subcontractors who made decisions about additional services for the children and family and then filed the information. The forms included the names of the children and families. For this project, the plan providers made a photocopy of the form and removed or obscured the name of the child. As mentioned previously, early in the project, copies of the forms were sent directly to the Project Evaluation Team at Yale University. Because of the scope of incomplete and unusable forms, the procedures were changed. The forms were first mailed to the Department of Social Services. Personnel there would contact services to obtain the complete and corrected forms as needed. Once the forms were completed correctly and included a matched set, the forms were sent to the Project Evaluation Team.

The information completed on the pre- and post-treatment forms included places to provide ratings by the clinician but also multiple places for narrative comments to be written. Much of the information (e.g., narrative and fill-in questions) on each of the assessment forms required development of a codebook to permit reliable scoring for all of the items and scales on each measure. The codebook translated items on the measure into variables that could be scored and used for data analysis. (Please see Appendices C - G for a list of the codes from the measures and new variables created to facilitate analyses; also included is a description of procedures for data entry and checking.)

DATA ANALYSES AND RESULTS

Descriptive Analyses and Characteristics of the Sample, Treatment, and Settings

The variables analyzed in the project (please see Appendix E) include the items and summary scores that were obtained directly from the pre- and post-treatment measures plus additional variables created from them based on the coding key and procedures mentioned earlier. The data analyses were completed to characterize the children, families, and services provided and to address the questions noted previously.

Characteristics of the Sample. Table 1 provides a summary of the sample and characterizes: subject and demographic features of the families, symptoms, diagnosis, and treatment, home, and caregiver, the health plans, and behavioral health company. As evident in the Table, the mean age of the children was 10.1 years of age. Males, children of European American ethnicity, and children with externalizing behaviors as the chief complaint were modal characteristics within the respective categories. Overall mean GAF scores at pre were 51.4, placing the children in a range (51 – 60) characterized by moderate symptoms or moderate difficulty in social or school functioning. In most cases (70.7%) the child was living with the mother who was the current caregiver. Less than a third (30.6%) of the parents in the sample were married (please see the table for additional information.)

Health plans included in the project, based on posttreatment data, included Anthem Blue Cross/Blue Shield/Blue Care Family Plan (*n* = 460), Healthnet/PHS (*n* = 231), Community Health Network of CT (*n* =140), and First Choice of CT/Preferred One (*n* = 57). The Behavioral Health

Subcontractors at post assessment included Value Options (*n* = 649), ProBehavioral Health (*n* = 46), Magellan Behavioral Health (*n* = 135), and CompCare (*n* = 36).

Characteristics of Treatment. Table 1 also includes several characteristics of the treatments that were provided. Family/couples therapy and individual therapy (for 40/50 minutes) were the two most frequently used treatments, and were applied to 76.4% and 73.2% of the cases, respectively. Different variations of individual therapy were distinguished on the assessment forms based on how much time was allotted to individual sessions and who provided the treatment (please see Table 1). Individual therapy in one form or another was provided to 80.6% of the sample. Medication management was provided to 12.4% of the cases. Typically, families received more than one intervention (Mean = 3.3 interventions per family, range from 1 – 11 interventions). Two to three interventions were provided for the modal case. The combination most frequently used was individual therapy and family therapy.

Most families (79.5%) received outpatient treatment once a week. The mean number of sessions was 11 before treatment ended. Reason for discharge evaluated by the therapists indicated that 38.4% completed treatment; 60.7% did not complete treatment. Not completing treatment referred to terminating but also to being referred out to another program.

Characteristics of the Health Plans. Impetus for the project was an evaluation of different outcomes that might be associated with the different plans. As a preliminary evaluation, we examined characteristics of the children, families, and services seen among the different plans. Table 2 presents the four health plans mentioned previously. To evaluate whether the plans differed on key domains, analyses of variance were completed for continuous variables (e.g., GAF scores) and chi square tests were completed for categorical variables (e.g., child sex). Means, percentages, and differences among the companies are presented in Table 2. Statistically significant differences are noted for the overall effect (differences among plans) as well as multiple comparison tests for the continuous variables (Bonferroni *t* tests to control for the number of tests within variables) to note specifically which plans differ. The comparisons of the different groups must be interpreted cautiously because of the large differences in the number of children from the different plans (*n* = 57 – 460).

Insert Table 2 Here

The plans differed at pretreatment on the extent to which Department of Children and Families (DCF) was involved with the case, GAF scores at pre, highest GAF in the previous year, and mental functioning, emotional functioning, and severity of chief complaint. In relation to GAF and mental and emotional functioning, Community Health Network of CT tended to include children with greater impairment at pre and at post (Table 2). This plan also included proportionately more families from minority groups and with lower educational attainment than families in the other plans. There are other differences among the plans on individual measures but not as clear a pattern across measures as the ones noted already.

Treatments also varied among plans in terms of the extent to which individual and group therapy was used; the number of sessions too varied among the plans. The only difference that was statistically significant was in relation to group therapy, which tended to be provided much more by Anthem Blue Cross/Blue Shield/Blue Care Family Plan than by the other plans. The caution here about the great discrepancies in sample sizes is pertinent to mention again, because the estimates of proportions can vary widely with fewer cases for the smaller sample sizes.

Evaluation of Treatment Outcome and Change over the Course of Treatment

Preliminary Analyses and Outcome Measures. The primary measures of treatment outcome were the GAF and total scores from the impairment measures of emotional functioning, mental functioning, medical/health, role performance, and the total summary score from the four impairment measures. As noted previously, clinicians rated these areas of functioning separately as strengths and as sources of impairment, on both pre and posttreatment measures. The Pearson product-moment correlations between the ratings of these characteristics as strengths and as sources of impairment in a given area were high. For example, separate ratings of mental functioning as a strength and as a source of impairment were correlated at $r\ (844) = -.82$, $p < .001$. This magnitude of correlates suggests that ratings were largely redundant, i.e., measure very similar areas of functioning. To evaluate change over time, we used the impairment ratings because these reflected scales with multiple items, permitted finer discrimination of the characteristics of interest, and could better reflect change over the course of treatment.

The four impairment scales (mental, emotional, medical/health, role performance) were used. Correlations among these scales, when each was correlated with each of the others, were in the moderate range (Median $r = .44$, $p < .001$). These correlations suggest the impairment areas are related but do not overlap. The four areas of impairment were used separately but also summed to provide a total functioning score. Difference scores, i.e., pre minus post for the GAF and impairment measures, were used to evaluate change over the course of treatment.

It is possible that the changes in the GAF and changes in impairment scales over the course of treatment were correlated so highly as to be redundant. Pearson product-moment correlations were computed between GAF and individual impairment scores (difference scores) used to reflect change over the course of treatment. The correlations ranged from $r = .21$ to .53 (Median $r = .38$). The correlations indicate relatively little overlap (shared variance, Median = 14.4%) among the measures. Although the outcome measures are moderately related, they are not at all redundant. As an important example, change in GAF scores and emotional impairment scores (symptoms) over the course of treatment were correlated at $r\ (739) = .43$, $p < .001$, 18.4% shared variance). This modest relation between adaptive functioning and symptoms is in keeping with prior research noting the importance of these two domains and their relative independence in evaluating child psychiatric disorders.[6,7] Primary outcome measures were the changes in GAF, each of the four impairment domains, and the total impairment/functioning summary.

Table 3 includes those measures that were used to evaluate changes in child functioning over time. Added to the GAF and functioning scales are DCF involvement in the case, diagnostic status of the children at the end of treatment, and whether the parents' goals had been met. As a preliminary evaluation of change overall, all children were considered as a group. Correlated *t* tests were completed for the measures of functioning and impairment. As shown in Table 3, over the course of treatment children were rated by the therapists as having improved on the GAF, on each of the functioning subscales (emotional, mental, medical/health, and role performance) as well as the total impairment summary score (all $p < .001$). Thus, for the overall sample statistically significant improvements were made over the course of treatment.

Insert Table 3 Here

The GAF represents a measure that has widespread use in clinical work and research and provides a relatively familiar index that can be used as a benchmark to highlight the scope of the changes. For the overall sample, improvements were made in mean scores from approximately a mean of 51 to 57 over the course of treatment. Higher scores represent greater (improved) adaptive functioning. These GAF scores fall within the category of moderate difficulty in functioning (scores of 51 – 60). Thus, although improvements were made over time, by the end of treatment children as a group remained within the same category.

Other measures from pre to post or outcome available at post only are also included in Table 3. The extent to which the DCF was involved in the case was evaluated. The results indicated significantly less involvement of DCF at the end of treatment ($p < .001$) for the overall sample. From the ratings we evaluated whether the clinician felt the child met criteria for a psychiatric diagnosis. The proportion of children who met criteria for a diagnosis at pretreatment was similar to the proportion who met such criteria at posttreatment (98.5 and 95.6%, respectively). Clinicians were asked to evaluate at post whether the desired treatment outcomes were met from the perspective of the parent. As noted in Table 3, as many parents did and did not believe the treatment goals were achieved.

Of the 893 cases, 343 (38.4%) completed treatment; 542 (60.7%) terminated treatment. Data were missing for 8 (0.9%) of the cases. Comparisons of completers versus noncompleters (*t* tests) indicated that there were no statistically significant differences in outcomes as reflected in the main outcome measures (pre to post-treatment changes in GAF, emotional, mental, and others functioning or in DCF involvement of the case). The cases that did not complete treatment, compared to those who completed treatment, did not differ significantly in age, proportion of each sex, severity of chief complaint, and total diagnoses at the beginning of treatment, or measures of socioeconomic and educational status (caregiver job title, education). Completers were statistically significantly less impaired on the GAF at the beginning of treatment than noncompleters ($t(877) = 2.04$, $p < .05$). However, the pretreatment means on the GAF for these two groups (51.93 and 51.03, respectively) reflect a difference that is minute clinically. Overall, the analyses suggest that completers and noncompleters were not consistently different on the measures at pre- or post-treatment.

Factors that Predict Treatment Outcome . A key goal of the project was to evaluate characteristics that predict outcomes at the end of therapy. The criteria used to evaluate outcomes for these analyses included pre to post changes on the GAF, each of the impairment scales, and summary total across all impairment scales. We present the GAF and summary total impairment score to simplify presentation of the results. However, in any cases in which the results on the individual impairment scales are consistently different from the results obtained with the summary score, we present all of the analyses.

Multiple regression analyses were used to evaluate the impact of various factors on posttreatment outcomes. Analyses were conducted separately by types or categories of variables (e.g., subject and demographic variables) rather than including all variables of interest in one analysis. This strategy was elected to help clarify the conclusions. In addition, many of the forms completed at pre and posttreatment omitted considerable amounts of data. From a data-analytic standpoint, a case (child) with missing data on any one of the variables included in the analysis is completely omitted from that analysis. The more variables included in any single analysis, the greater the number of cases deleted for the analysis. Evaluation of smaller subsets of predictors and evaluation of summary outcome measures (GAF, total functioning score) maximizes the number of children of the 893 who are included in any particular analysis.

Child and Family Subject and Demographic Factors. An initial focus of the project was whether child and family factors would predict treatment outcome. Two indices were used to evaluate outcome including changes in GAF scores and total functioning across mental, emotional, medical, and family role domains. Multiple regression analyses were completed to evaluate child and family subject and demographic variables. Specifically, we examined a subset of variables to minimize deletion of cases. The predictors included child sex, age, parent employment status, number of people (adults or siblings) living in the home, whether the parent/caregivers were both in the home, parent level of education, and employment position. These latter two indices were used to operationalize socioeconomic status. These include representative variables of key child and demographic domains included in the first hypothesis noted previously. (Even with only this small subset of variables, approximately one-half of the sample was deleted from the statistical tests.) An analysis that included these variables significantly predicted changes over the course of treatment on the GAF *(F* (8,404) = 2.00, $p < .05$) but not on the overall total functioning scale *(F* (8,414) = 1.86, $p < .10$). The conclusion for the GAF is that overall, disadvantaged families changed less. However, the only individual variable that was significantly related to GAF outcome was child sex. Girls changed more than boys, although the amount of difference was < .5 points on the GAF. In general, child, parent, and family demographic characteristics included in the analyses did predict outcomes but the differences were not strong or consistent among the outcome measures.

Child Functioning at Pretreatment. We expected that indices of dysfunction of the child would predict outcomes at the end of treatment. Specifically, we predicted that children with more severe dysfunction at the beginning would show worse outcomes at posttreatment. To operationalize dysfunction at pretreatment, we used as predictors total risk assessment, severity of chief complaint, total number of chief complaints, total number of diagnoses, whether presenting complaints included internal, externalizing, or both types of problems, and history of previous treatment. A multiple regression analysis indicated that these predictors significantly influenced treatment outcome on the GAF *(F* (6,484) = 4.57, $p < .001$) and total impairment measure *(F* (6,510) = 2.34, $p < .05$). For the GAF, the significant predictors were severity of chief complaint and the presence of externalizing and internalizing symptoms, and total risk. More severe children at pre showed less favorable outcomes on the GAF. For the total functioning outcome measure, only severity of problem behavior predicted outcome, with more severe children showing less change at posttreatment. In general, initial dysfunction of the child does indeed predict the degree of change of the child.

Treatments and Characteristics of Services. As noted in Table 1, several different treatments were provided alone or in combination. A key question is whether the different services were associated with different outcomes. Many different treatment options were available and an initial test was completed to evaluate whether some of these might be combined for purposes of data analyses. In particular, four variations of individual therapy were included based on duration of the sessions (1/2 hour vs. 40/50 min) and who provided the treatment (MD vs. non-MD). Comparison of the variations of individual therapy indicated no difference at posttreatment on changes in the GAF or in overall total impairment. Consequently, for all analyses that follow, individual therapies were combined.

Most children received more than one treatment, as noted previously, in diverse combinations and for various durations. The sample size makes it particularly difficult to examine the impact of any one form of treatment versus another (e.g., individual therapy vs. group therapy). For example, at posttreatment on the GAF, 89, 77, and 7 cases received individual therapy, family therapy, or group therapy alone. The sample sizes are too varied and too small. Also, cases that received the different treatments were slightly different in such characteristics as age or pretreatment functioning. All of the various combinations could not be examined for the same reason. Even so, selected analyses were completed here to converge in a way that evaluates the relative impact of the treatments.

As an initial analysis, groups were compared to on the main outcome measures, improvements in GAF and total functioning across the four domains. These comparisons involved *t* tests and evaluated children who received one form of therapy (e.g., individual therapy) versus those who did not receive that therapy. Children in this latter condition could have received any and all other treatments except for individual therapy. This type of analysis was completed for each of the therapies.

Table 4 presents the changes from pre- to post-treatment. Children who received individual therapy showed less improvement than those who did not receive this form of treatment. Family/couples therapy and bibliotherapy too were associated with greater improvements. Direct comparisons of the three treatments that might be seen as making a difference could not be made; as noted previously, almost all families received individual and family therapy in combination. Other outcomes were analyzed (e.g., DCF involvement at post, whether the child met criteria for a disorder at post, and whether parent goals were reached at the end of treatment). These did not reflect differences among the treatments. In general, treatment could not be evaluated in a way that permits a fair direct comparison. The sample size was too small to identify groups with common sets of treatment and then to control for differences at pretreatment that would need to be considered in evaluating outcome. There is a broader issue noted later in the discussion, namely, the forms of treatment assessed on the measures are not different types of therapy, but rather ways of delivering treatment or broad approaches to treatment. For example, individual therapy and family therapy, treatments on the assessment forms, are not treatment techniques. There are hundreds of variations of individual and family therapies and a broad category (family therapy) is not usually viewed as meaningful because of the differences among treatments within a category.

Insert Table 4 Here

Amount of Treatment. In treatment, it is often useful to evaluate dose-response relations, i.e., whether more of a given treatment or more treatment is associated with greater change. Two measures were examined to explore the relations of amount of treatment to change: the number of sessions of treatment that the child received and the number of different treatments that were provided. As mentioned previously, most children received more than one treatment (please see Table 1). As might be expected, the number of different treatments provided to the children was positively correlated with the number of sessions of treatment (r (885) = .31, $p < .001$). Children who received more treatments tended to receive more sessions. The number of sessions received was correlated significantly with changes in the GAF (r (822) = .19, $p < .001$). This is a correlation of a small magnitude. No relation was evident between number of sessions and changes in total functioning ($r = .05$). In terms of the number of different treatments provided, the results indicated no significant correlation between how many treatments were provided and improvements on the GAF or total impairment scales (both *r*s = -.01, not significant).

Family Involvement in Treatment. Clinicians rated the extent which the family was involved in the treatment plan, the client was involved in the plan, and the family was actually involved in treatment. Multiple regression analyses were completed to evaluate the extent to which clinician ratings of involvement influenced change, using the three measures (family or child involved in the plan, family involved in treatment). The analyses indicated that involvement was significantly related to changes in the GAF ($F(3,814) = 21.05$, $p < .001$), total impairment scores ($F(3,851) = 11.13$, $p < .001$), and whether the parent desired outcome was met ($F(3,852) = 21.61$, $p < .001$).

It is quite possible that families were more involved in treatment to begin with were those with children who were less impaired. Correlations between family involvement in treatment and pre treatment status of the child helped to address this. At pretreatment, child GAF scores, total emotional impairment (symptoms) scores, and severity of presenting complaints were not consistently related to subsequent involvement of the family in treatment (*r*s = -.03, not significant, .03, not significant, and -.08, $p < .05$). (The negative sign reflects that the more severe the dysfunction the less involvement of the family.) Only one of these correlations is statistically significant but the magnitude of the correlations indicates very little relation. For these correlations, we used the measure of family involvement in treatment as the most direct measure of interest. The pattern of results and correlations are similar whether family involvement in the plan (rather than treatment) and client involvement in treatment are used.

Although family involvement in treatment was not related consistently to severity of child dysfunction at the beginning of treatment, involvement was related to measures of socioeconomic status of the families. Families with a higher level of education attainment and job classification, were more likely to be involved in treatment (rs = .23 and .16, respectively, both $p < .001$).

Overall, the pattern of results suggests that family involvement is related to changes over the course of treatment. These changes do not seem to be due to the likelihood that families with more severely impaired children are less likely to be involved in treatment. On the other hand, the few demographic variables available in the data suggest that families who are higher in socioeconomic status are more likely to be involved in treatment.

Health Plans. A key interest was the extent to which different health plans were associated with different outcomes at the end of treatment. Analyses mentioned previously indicated that the plans differed in characteristics of the children and families for whom they provided services. Specifically, plans differed at the beginning of treatment in a variety of child and parent characteristics including GAF scores and mental and emotional functioning and severity of chief complaint. Any differences at posttreatment might be explained by the differential effectiveness of the plans in effecting change, differences that were evident at pretreatment, or differences in developmental courses of children who varied at the outset.

Outcomes for the children were evaluated to take into account (statistically control for) differences in children seen at the plan including educational level of the parent and child severity of problems at the outset of treatment. We evaluated the degree of change in GAF and the total functioning scale. Outcomes did not vary for children seen in the different health plans using GAF and the total summary across the four impairment scales noted previously once initial differences in parent educational level or child severity of problems at pretreatment were controlled ($F < 1$, $F = 1.04$, respectively, both not significant). Although redundant, it is worth noting that even without controlling for initial differences in who was seen, the health plans were not associated with different amounts of change from pre to posttreatment (*F* = 1.22, not significant). Overall the results of the tests provided previously (Table 2) and here suggest that children from the different health plans differed somewhat on child demographic and subject variables as well as clinical dysfunction at the outset of treatment. These differences are relatively minor and continued to be evident at post. However, in terms of amount of change over time, the amount of change was not consistently different among the different plans. As a cautionary note, the large differences in proportions of participants in each of the plans makes comparisons among the plans tentative.

DISCUSSION

The project characterized the children, families, and services for approximately 900 families seen in one of the four health plans in the State of Connecticut. The measures completed by clinicians before and after treatment provide a rich resource to convey who is seen, the characteristics of children and families, the type of treatment provided, and the extent of change in the children by the end of treatment. Although there is no substitute for the full description of the sample (Table 1), it is useful to highlight key characteristics. Children (Mean age = 10.1 years) seen in therapy in this project included an almost equal proportion of boys and girls (5:4 ratio). Externalizing problems (e.g., disruptive behaviors) were the primary chief complaint. In terms of psychiatric diagnosis, oppositional defiant disorder was the most common primary diagnosis, followed by adjustment disorder. More than a third of the children had previous outpatient or inpatient treatment. Most of the children did not have prior experience with medications as their treatment. Although four health plans were included in the data, their proportions varied considerably ranging from approximately 50% of the sample for one plan, to approximately 6% of another plan (Anthem Blue Cross/Blue Shield/Blue Care Family Plan, and First Choice of CT, respectively).

The main findings in relation to the intended goals are as follows:

1) Children demonstrated statistically significant improvement over the course of treatment;

2) The improvements were reflected in global functioning (GAF), as well as reduced impairment in mental, emotional, medical/health, and role performance;

3) The magnitude of the change on the measure of global functioning suggested that, clinically speaking, the changes were relatively small clinically, i.e., children remained within the same category of functioning;

4) Most children received multiple treatments and diverse combinations of treatment, with some form of individual therapy and family therapy as the most common combination;

5) Treatment outcome was influenced by socioeconomic disasdvantage of the family as well as severity of initial impairment of the child, with greater disadvantage and severity predicting less improvement;

6) Family involvement in treatment influenced global functioning, impairment, and whether the parents' desired treatment outcomes were met; greater involvement was associated with greater changes in the children at the end of treatment; and

7) The different health plans varied somewhat in the children and families they saw. However, there were no consistent differences in outcomes for the different plans in terms of global functioning or impairment.

Several limitations warrant mention. Many of these were known at the outset but warrant comment nevertheless. First, the study was a naturalistic evaluation of treatment as usually provided rather than a controlled clinical trial. As such, there are inherent ambiguities on key facets of the findings. Among them, improvements in the children in adaptive functioning and several spheres (cognitive functioning, symptoms, medical/health, and role performance) were evident from pretreatment to posttreatment. These changes might imply that treatment was responsible for change. However, the changes cannot be attributed to the treatment on the basis of this study. Changes in symptoms and functioning often occur in both children and adults referred for treatment over periods of time without treatment. Repeated assessment, attenuation of the extreme conditions that led to initiation of treatment, and statistical artifacts (e.g., statistical regression) are key influences on change that can be misinterpreted as treatment effects. In short, the results cannot be interpreted to imply that treatment does or does not have impact on children and families.

Second and related, there are caveats in the interpretation of the findings in light of the design. Among these is the degree of change among children seen in treatment. Children changed significantly (statistically) in several areas of functioning over the course of treatment. The magnitude of the changes did not greatly improve their level of functioning on the GAF. Interpretation of this overall effect must be made cautiously because the changes that would be made without treatment were not assessed in a separate or comparable sample. In principle, it is possible that there would be no change or deterioration without treatment. Although on average, at the end of treatment, children were a little better off than they were when they came into treatment. One cannot discern the value of treatment without the appropriate comparison conditions that evaluate the course of change without treatment.

Related, other interpretations must be made cautiously. As an important example, family involvement in treatment was associated with therapeutic change. Families more involved in treatment showed greater change. This can mistakenly be interpreted as a call for action, namely, that one ought to involve families more in treatment because that will help them in treatment and lead to greater change. The present data set cannot provide a basis for that interpretation and recommendation. Family involvement in treatment may have been rated by clinicians as greater based on the amount of changes made in the child. That is, clinicians may rate family involvement as higher based on the degree of therapeutic change. Also, family involvement was related to socioeconomic status; socioeconomic disadvantage was associated with less involvement and less therapeutic change. Socioeconomic disadvantage and many features associated with that (e.g., stress in the home, ability to come to treatment) could be among the critical influences rather than or in addition to family involvement per se.

Third, the study cannot be said to represent all children seen in treatment in the State of Connecticut or even all children seen in the health plans represented. The sample is relatively small in comparison to all children treated in the plans. Also, it may well be that those facilities and clinicians that submitted completed forms represent a select sample. Problems in data collection and analysis further contribute to this concern. Several hundred forms could not be analyzed because critical information was missing or incomplete. Among the forms that could be used, many had data missing from multiple items. For statistical analyses, some of the comparisons reflect a sample reduced from approximately 900 cases to half because of the impact of missing data on critical items.

Finally, a limitation is the difficulties associated with evaluating the impact of treatment and the possible differential effects of treatment. Two factors made comparisons of the effects of different treatments problematic. First, too few cases received a single form of treatment to permit evaluation of that treatment or comparison with another treatment while controlling for possible differences at pretreatment. As a rule, treatment combinations were used involving multiple treatments, with an average of slightly more than three treatments per case. The sample size did not permit evaluation of all of the different combinations. Second, the measures used by the clinical services did not evaluate different treatment techniques. Rather, the measures focused primarily on *modalities of delivery* or the format (e.g., individual, family, and group therapy). There are many variations of individual, family, and group therapy. From the research literature, some of these are known to work; others have either no evidence on their behalf or have evidence that they do not work very well. A limitation in evaluating treatment in this project includes the prospect that quite different treatments (e.g., psychodynamic, cognitive, behavioral) were used but grouped together (e.g., individual therapy). It would be useful to examine not only the modality of therapy (individual, group, family) but also the type of treatment or technique actually provided.

There are notable contributions of the project. First, the descriptive features of the project are important in their own right. The data collected at pre and post convey in a systematic way who is seen in clinical services across the settings, the range of functioning presented, family characteristics, facets of treatment delivery, and clinical outcomes. The database can be used to address many additional questions about the likely relations among characteristics of treatment and change and the scope of the changes that coincide with treatment.

Second, introducing systematic assessment of outcomes into clinical services is an enormous contribution. The outcome data provide a basis to examine whether and the extent to which children improved over the course of treatment. To be sure, there were many obstacles in obtaining the measures. This is understandable because evaluation of treatment in a systematic way in clinical work is not part of training for the vast majority of mental health professionals, is not part of the ethos of most clinical services, and is not required or demanded by health plans, clinical services, or the public at large. Even with such disincentives operating, the State was able to evaluate treatment and to convey that patient progress can be assessed systematically.

Several recommendations might be derived from the project. Three are salient and might serve as a basis for subsequent actions and next steps to enhance service delivery, tracking of cases, and clinical care. First, integration of evaluation of service delivery at the level of individual patients has considerable value and ought to be considered as a routine procedure. If assessments cannot be conducted for virtually all patients before and after treatment, there might be value in periodic assessments (e.g., for a period of time during the year to represent the full year). Identifying what treatments are used, how they are used, and for whom they are used is useful to see variations in services and whether some applications appear more promising than others. In clinical work, individual patient care can be greatly improved by identifying patient status (e.g., symptoms, functioning) in a systematic way intake, mid course, and posttreatment. Even the best treatments, without evaluation of impact at the level of the individual child and family, may not be very helpful. For example, the current movement to integrate evidence-based treatments in clinical practice has obvious merit. At the same time, in any individual case, whether or not a patient improves and benefits from that treatment is quite another matter. Systematic information about progress and change during treatment can serve as a basis for decision making about what treatments to continue or add and when therapeutic change has been achieved.

Asking clinicians to evaluate clinical care and progress without systematic data is a very well researched area. Among the key findings, clinical evaluation (e.g., judgment, informed opinions, and anecdotal views) by itself does not usually detect well the nature and scope of change. There are normal cognitive biases in thinking that often interfere with drawing well-based conclusions. Systematic assessment cannot only serve individual patients but also provide a basis for periodically evaluating clinical services and their impact more generally.

Second, the assessment tool currently in use at pretreatment and, if retained, the one used for posttreatment ought to be re-evaluated. Several years ago pretreatment assessment (the intake form used in this project) was prepared and integrated into clinical practice. It might be useful at this time to reevaluate the measure. A goal would be to see whether all of the variables, concepts, and characteristics of children and families of interest to the key parties (health plans, service providers, clinicians, and parents) are included in the measure. For example, key characteristics of families (e.g., race and ethnic identity of the families) are not included in the pretreatment measure. Also, characteristics of the treatments (precisely what treatments are used) are not sampled in light of current applications of various treatments. For example, there are many evidence-based treatments now available, some of which have been systematically integrated into services in the State. Tracking the use of these as well as their effects is likely to be of interest, but is not available in the current measure in use. It is important to underscore a critical point. More information might be readily obtained, without extending the length of the measure or the time to complete the measure, a point elaborated below.

Third, if there were no interest in changing what is measured, the current pretreatment measure could be developed further to improve validity and utility. It would not be difficult to develop user (clinician) friendly measures (at pre or at pre and post) that are more abbreviated than the current forms in use and that yield clinically and administratively as, or indeed, more useful information. The measure in place routinely for pretreatment and the one added for this project for posttreatment include several undesirable features that could be relatively easily rectified. (The posttreatment measure was added for the purposes of this project and was required to repeat several items from the pre measure to permit direct comparisons of key characteristics of the children before and after treatment.) Among the features to change would be to omit or minimize: a) single items to represent critical clinical characteristics of the child and family, b) fill-in questions, c) ambiguities in key concepts that clinicians may rate especially inconsistently, and d) redundancies (e.g., items putatively measuring different facets of the child or family that are very highly correlated). Some changes in the formatting of items and use of sets of items with validity and reliability (e.g., based on the some of the data in the present database) would make the form easier for clinicians to use and easier to evaluate among those interested in the information. For example, many of the fill-in questions would be relatively easy to change so it could be scored more efficiently without having someone evaluate and separately score these. This is not advocating the elimination of qualitative measures. Yet, some of these could be converted in a way that would provide information more readily used by health plans and clinical services.

A related change in the measure pertains to scoring. The measure used at the beginning of treatment could be readily altered so many or all of the items could be computer scored (e.g., by scanning). This would not only permit rapid and less expensive scoring than the hand scoring and checking of the present project, but could also move from scoring to entry on a database in a single step. More advanced technologies (e.g., entry on a dedicated web or centralized web site or laptop) could make the information readily available too. However, even a slight advance in the technology used to obtain and score the information would make the data more useful for decision making at multiple levels.

Overall, a strength of the project was the ability to evaluate services across multiple health plans, facilities, and clinicians. This is extremely important because systematic information of the kind collected by the State can serve as a strong basis for providing services and making changes as needed. Implementing several procedures to procure the data about patient care was formidable and could provide the basis for widespread evaluation of services. The project shed some light on the scope of services provided, the changes children make over the course of treatment, and the factors that predict these changes. Many critical questions of interest could not be answered or answered clearly by the nature of the data provided and how services are delivered. However, the information serves as a base for identifying what the constituencies and parties interested in treatment need to know, what further information not available in existing measures would be helpful, and how services might be evaluated and improved.

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Table 1
Characteristics of Children, Families, and Services Obtained from Pre and Post treatment Measures

Child Characteristics (See notes at the end of the table)	**Number**	**%**	**Mean**	**Range**	**SD**
Age (age)			10.1	1 - 18	3.9
Total completed	881	98.7			
Total missing	12	1.3			
Sex (sex)					
Male	471	52.7			
Female	380	42.6			
Total missing	42	4.7			
Race (race)					
White	304	34.0			
Black	221	24.7			
Hispanic	284	31.8			
Asian	3	0.3			
Native American	9	1.0			
Mixed/other	55	6.2			
Total missing	17	1.9			
School (school)					
Grades 1 - 12	738	82.6			
Non graded special education	11	1.2			
Other	117	13.1			
Total missing	27	1.0			
Chief complaint (extint)					
External	465	52.1			
Internal	170	19.0			
Both external and internal	201	22.5			
Other	49	5.5			
Total missing	8	0.9			
Previous treatment (pretre)					
Previous outpatient treatment	323	36.2			
Previous inpatient treatment	17	1.9			
Previous both outpatient and inpatient treatment	48	5.4			
No previous treatment	445	49.8			
Total missing	61	6.8			
Psychiatric medication (psychmed)					
Psychiatric medication	133	14.9			
No psychiatric medications	586	65.6			
Total missing	174	19.5			

Table 1 continued

	Number	%	Mean	Range	SD
Risk assessment (riskas)					
Yes risk assessment for suicidal, homicidal, assaultive behaviors	237	26.5			
No risk assessment	589	66.0			
Total missing	67	7.5			
Substance abuse (subab)					
Substance abuse	45	5.0			
No substance abuse	750	84.0			
Total missing	98	11.0			
DSM (dsmprim)					
Axis I primary					
Oppositional defiant disorder	152	17.0			
Adjustment disorder - mixed disturbance of emotion and conduct	135	15.1			
Dysthymic disorder	82	9.2			
Posttraumatic stress disorder	68	7.6			
Adjustment disorder unspecified	54	6.0			
Adjustment disorder with mixed anxiety and depression	47	5.3			
Disruptive behavior disorder NOS	42	4.7			
Attention deficit/hyperactivity disorder NOS	41	4.6			
Adjustment disorder with anxiety	35	3.9			
Adjustment disorder depressed mood	35	3.9			
Attention deficit/hyperactivity disorder - combined type	32	3.6			
Major depressive disorder	24	2.7			
Conduct disorder	24	2.7			
Adjustment disorder with disturbance of conduct	18	2.0			
Depressive disorder NOS	14	1.6			
Other	90	9.8			
No diagnosis	2	0.2			
Axis I secondary (dsmsec)					
Physical/sexual abuse/neglect of a child	63	7.1			
Parent - child relational problems	50	5.6			
Oppositional defiant disorder	37	4.1			
Dysthymic disorder	22	2.5			
Posttraumatic stress disorder	15	1.7			
Learning disorder NOS	13	1.5			
Attention deficit/hyperactivity disorder -- combined type	13	1.5			
Attention deficit/hyperactivity disorder NOS	12	1.3			

Table 1 continued

	Number	%	Mean	Range	SD
Enuresis	12	1.3			
Cannabis abuse	10	1.1			
Other	116	12.5			
Rule out diagnosis	134	15.0			
No diagnosis on secondary	393	44.0			
Total missing	2	0.2			
Axis II (dsmax2)					
Deferred	242	27.1			
Other	45	5.0			
No diagnosis	582	65.2			
Total missing	24	2.7			
Axis III (dsmax3)					
Diseases of the respiratory system	99	11.1			
Symptoms, signs, and ill defined conditions	49	5.5			
Diseases of the nervous system	16	1.8			
Complications with pregnancy, childbirth and puerperium	8	0.9			
Diseases of the genitourinary system	8	0.9			
Diseases of the ear, nose, and throat	9	1.0			
Other	58	6.4			
No diagnosis	624	69.9			
Total missing	22	2.5			
Axis IV					
Problems with primary support group (prisup)	761	85.2			
Educational problems (educat)	267	29.9			
Problems related to social environment (socen)	126	14.1			
Problems related to legal system/crime (legsys)	67	7.5			
Other (ocupa, housin, heacar, othrpro)	77	8.7			
Global Assessment of Functioning pre (gaf)			51.4	28 - 81	6.3
GAF completed	887	99.3			
Total missing	6	0.7			
Impairment -- pre					
Total mental functioning (totimen)			10.6	4 - 20	3.6
4 - 7	197	22.0			
8 - 11	319	35.8			
12-15	257	28.8			
16 - 20	72	7.9			
Total missing	48	5.6			
Total emotional functioning (totiemo)			13.0	4 - 25	3.1
4 - 10	170	19.1			
11 - 17	588	57.7			

Table 1 continued

	Number	**%**	**Mean**	**Range**	**SD**
18 - 25	62	6.9			
Total missing	73	16.3			
Total medical functioning (totimed)			6.1	3 - 13	2.7
3 - 6	490	54.9			
7 - 10	305	34.2			
11 - 13	43	4.8			
Total missing	55	6.1			
Total role performance, rel, etc (totifam)			9.3	1 - 18	2.7
1 - 5	52	5.8			
6 - 8	309	34.6			
9 - 11	322	36.0			
12 - 14	146	16.3			
15 - 18	39	4.4			
Total missing	25	2.9			
Grand total impairment pre (imp_totr)			39.0	14 - 68	9.7
Severity of Presenting Problem					
Severity of Problem 1 (prob1)			3.1	1 - 10	1.5
1 - 3	540	60.2			
4 - 6	238	26.6			
7 - 10	28	3.1			
Total missing	87	9.7			
Severity of Problem 2 (prob2)			3.0	1 - 9	1.5
1 - 3	405	45.3			
4 - 6	157	17.6			
7 - 9	17	1.9			
Total missing	313	35.1			
Severity of Problem 3 (prob3)			2.9	1 - 9	1.6
1 - 3	201	22.6			
4 - 6	73	8.2			
7 - 9	11	1.2			
Total missing	608	68.1			
Current medications - pre (curmed)					
Yes medication	138	15.5			
No medication	576	64.5			
Total missing	19	2.1			
Child living in residential facility (res)					
No	815	91.3			
Yes	58	6.5			
Total missing	19	2.1			

Table 1 continued

	Number	**%**	**Mean**	**Range**	**SD**
Total number of siblings in the home (totsibh)			1.5	0 - 7	1.4
0 siblings	257	28.8			
1 sibling	227	25.4			
2 siblings	197	22.1			
3 siblings	106	11.9			
4 or more siblings	78	8.7			
Total missing	28	3.1			
Total number of adults in home (totadh)			1.6	0 - 5	0.8
0 adults	28	3.1			
1 adult	390	43.7			
2 adults	390	43.7			
3 or more adults	55	6.2			
Total missing	30	3.4			
How long living in current home (livhome)					
Less than 3 months	80	9.0			
3 months - l year	250	28.0			
1 - 3 years	257	28.8			
3 or more years	126	14.1			
Always	116	13.0			
Total missing	64	7.2			
Parent/Family Characteristics					
Current caregiver's sex (cgsex)					
Male	69	7.7			
Female	782	87.6			
No current caregiver	28	3.1			
Total missing	14	1.6			
Current caregiver's age (cgage)			36.2	19 - 73	9.7
Total completed	599	67.1			
Total missing	294	32.9			
Lives with child (cglive)					
Yes	791	88.6			
No	54	6.0			
Total missing	48	5.4			
Relation to child (cgrelc)					
Mother	631	70.7			
Aunt	35	3.9			
Grandmother	65	7.3			
Father	56	6.3			
Uncle	3	0.3			
Grandfather	5	0.6			

Table 1 continued

	Number	%	Mean	Range	SD
Other	47	5.3			
NA (no current caregiver)	28	3.1			
Total missing	23	2.6			
Relation type (cgrelt)					
Birth	644	72.1			
Adoptive	20	2.2			
Step-parent	5	0.6			
Foster	104	11.6			
Relative/friend	62	6.9			
NA (Not noted)	28	3.1			
Total missing	30	3.4			
Relationship status (cgrels)					
Married	273	30.6			
Single	263	29.5			
Separated/divorced	167	18.7			
Cohabiting	56	6.3			
Widowed	9	1.0			
Other	55	6.2			
NA (not noted)	29	3.2			
Total missing	41	4.6			
Employment (cgemploy)					
Yes, full time or part time	436	48.8			
No, unemployed	291	32.6			
NA (no current caregiver)	32	3.6			
Total missing	134	15.0			
Job Title (cgjobt)					
Farm laborers/menial service workers	5	0.6			
Unskilled workers	20	2.2			
Machine operators and semiskilled workers	49	5.5			
Very small business, skilled, manual, craftsmen, tenant farmers	28	3.1			
Clerical and sales, small farm and business	44	4.9			
Technicians, semiprofessionals, small business	35	3.9			
Smaller business, farm owners managers, minor professionals	20	2.2			
Administrators, lesser professionals proprietors, medium business	10	1.1			
Higher executives, proprietors of large business major professional	1	0.1			
NA (no current caregiver or unemployed)	315	35.3			
Total missing	366	41.0			

Table 1 continued

	Number	%	Mean	Range	SD
Education (cgedu)					
High school diploma	235	26.3			
Some college/technical school	81	9.1			
Other	185	21.7			
NA/unknown	331	37.1			
Total missing	62	6.9			
Other current caregiver (ocg)					
Yes, other caregiver	402	45.0			
No or NA noted	464	52.0			
Total missing	27	3.0			
Other caregiver's sex (ocgsex)					
Male	327	36.6			
Female	75	8.4			
NA (no other current caregiver)	460	51.5			
Total missing	31	3.5			
Other caregiver's age (ocgage)			39.5	21 - 70	9.9
Total completed	291	24.5			
Total missing	674	75.5			
Other caregiver living with child (ocglive)					
Yes	307	34.4			
No	529	59.2			
Total missing	57	6.4			
Other caregiver’s relation to child (ocgrelc)					
Mother	31	3.5			
Aunt	6	0.6			
Grandmother	20	2.2			
Father	213	23.9			
Uncle	10	1.1			
Grandfather	20	2.2			
Other	82	9.2			
NA (no other current caregiver)	461	51.6			
Total missing	50	5.6			
Other caregiver's relation type (ocgrelt)					
Birth	180	20.2			
Adoptive	11	1.2			
Step-parent	76	8.5			
Foster	61	6.8			
Relative/friend	51	5.7			
NA (no other current caregiver)	461	51.6			
Total missing	53	5.9			

Table 1 continued

	Number	%	Mean	Range	SD
Other caregiver’s relationship status (ocgrels)					
Married	250	28.0			
Single	31	3.5			
Separated/divorced	39	4.4			
Cohabiting	51	5.7			
Widowed	3	0.3			
Other	15	1.7			
NA (no other current caregiver)	461	51.6			
Total missing	43	4.8			
Other caregiver’s employment (ocgemply)					
Yes full time or part time	257	28.8			
No, unemployed	67	7.5			
NA (no other current caregiver)	461	51.6			
Total missing	107	12.0			
Other caregiver's job title (ocgjobt)					
Farm laborers/menial service workers	0	0.0			
Unskilled workers	14	1.6			
Machine operators and semiskilled workers	35	3.9			
Very small business, skilled manual, craftsmen, tenant farmers	20	2.2			
Clerical and sales, small farm and business	7	8.8			
Technicians, semiprofessionals, small business	11	1.2			
Smaller business, farm owners managers, minor professionals	9	1.0			
Administrators, lesser professionals, proprietors, medium business	2	0.2			
Higher executives, proprietors of large business major professionals	2	0.2			
NA (no other current caregiver)	521	58.3			
Total missing	272	30.5			
Other caregiver's education (ocgedu)					
High school diploma	92	10.3			
Some college/technical school	29	3.2			
Other	64	7.1			
NA/unknown	693	69.8			
Total missing	84	9.4			
Family involvement in treatment plan (finvtp)			3.0	1- 5	1.4
Total completed	888	99.3			
Total missing	5	0.7			

Table 1 continued

	Number	%	Mean	Range	SD
Family involvement in treatment (finvt)			2.9	1 - 5	1.4
Total completed	889	99.6			
Total missing	4	0.4			
Client involvement in treatment (cinvtp)			3.2	1 - 5	1.3
Total completed	889	99.6			
Total missing	4	0.4			
Total involvement (totinv)			9.1	0 - 15	3.6
Total completed	891	99.8			
Total missing	2	0.2			
Treatment and Services					
Health Plans - post (hpp)					
Anthem Blue Cross/Blue Shield/Bluecare Family	460	51.5			
Healthnet/PHS health options	231	25.9			
Community Health Network of CT	140	15.7			
First Choice of CT, Preferred One	57	6.4			
Total missing	5	0.6			
Behavioral Health Company - post (bhcp)					
Value Options/Consulting Health Care System	649	72.7			
Probehavioral Health	46	5.2			
Magellan Behavioral Health	135	15.1			
Compcare	36	4.0			
Total missing	27	3.0			
Form of payment (payform)					
Commercial	5	0.6			
Medicaid	797	89.2			
Medicare	8	0.9			
Total missing	83	9.3			
Stage of treatment (stage)					
Initial	746	83.5			
Continuing	31	3.5			
Total missing	116	13.0			
DCF involvement (dcfinv)					
Case reported/investigated	77	8.6			
Case closed/never opened	125	14.0			
DCF intervention	310	34.7			
No DCF intervention	273	30.6			
Total missing	108	12.1			

Table 1 continued

	Number	%	Mean	Range	SD
Interventions - post					
Evaluation (evalp)	634	71.0			
Individual 1/2 hour (inhalfp)	56	6.3			
Individual 1/2 hour (MD) (inhalfmdp)	30	3.4			
Individual 40/50 minute (infminp)	654	73.2			
Individual 40/50 minute (MD) (infminmdp)	83	9.3			
Family/couple therapy (fctp)	682	76.4			
Group therapy (grutp)	77	8.6			
Medication management (medmanp)	111	12.4			
Intensive outpatient therapy (inoptp)	6	0.7			
Case management contacts (camacp)	255	28.4			
Community resources (comrecp)	60	6.7			
Bibliotherapy (biblip)	55	6.2			
Other (inotherp)	68	7.6			
EDT (otedt)	3	0.3			
Inhome (otinhom)	18	2.0			
PHP-IOP (ppiop)	10	1.1			
Inpatient (inpat)	1	0.1			
Total completed	890	99.7			
Total missing	3	0.3			
Frequency of sessions (freq)					
Daily	3	0.3			
2 - 6 times per week	25	2.8			
Once a week/weekly	710	79.5			
Biweekly	124	13.9			
Once a month	2	0.2			
Total missing	29	3.2			
Sessions to date (numsess)			1.9	0 - 6	0.8
Total completed	893	100.0			
Total number outpatient sessions (outsess)			11.0	1 - 82	8.8
Total completed	889	99.6			
Total missing	4	0.4			
Reasons for discharge (disreac)					
Completed treatment	343	38.4			
Terminated treatment	542	60.7			
Total missing	8	0.9			

Table 1 continued

	Number	%	Mean	Range	SD
Provider degree – pre (degree)					
LCSW	117	13.1			
LMFT	90	10.1			
MFT	45	5.0			
MS/MA	52	5.8			
MSW	302	33.8			
SWI/MSW/MFTI	53	5.9			
MA	40	4.5			
Other	98	10.7			
Total missing	95	10.6			
Sex of clinician (sexclin)					
Male	124	13.9			
Female	729	81.6			
Unknown	38	4.3			
Total missing	2	0.2			
Facility - pre (facility)					
Catholic Family Services	45	5.0			
Child Guidance Clinic - Waterbury	224	25.1			
Child Guidance Clinic - Bridgeport	35	3.9			
Clifford Beers Clinic - New Haven	104	11.6			
IHF/CFS - Hartford	40	4.5			
LNV/PCRC - Shelton	34	3.8			
United Community and Family Services - Norwich	80	9.0			
Village for Families and Children, Inc. - Hartford	102	11.4			
Wheeler Clinic - Plainville	27	3.0			
Wheeler Clinic - not indicated	30	3.4			
Yale Child Study Center - Hamden	22	2.5			
Yale Child Study Center - New Haven	71	8.0			
Other	78	8.5			
Total missing	1	0.1			

Notes: Variable names are given in parentheses to facilitate connections of the assessment devices and coding key in the appendices. The total number for the sample is 893. When the totals for each variable do not add up to 893 or exceed 893 the following has occurred:

- Missing or unusable data for a particular variable
- Overlapping categories where more than one variable in the section could be chosen

RECODED VARIABLES	**FIXED VARIABLES FOR TABLE**
A new variable category was established in the database.	The variable was arranged into different categories for the table. There is no new recoded variable in the dataset. The variable was left in the original categories in the database.

RACE – The categories of Asian and Native American were combined into one single category because there were so few cases in each.

SCHOOL – The categories of Pre-School, KG, Dropped out, and Other were combined into an Other category because there were so few cases in these categories. From the coding sheets 3 = Grades 1-12, 4 = Non-graded Special Education. All others are combined.

CHIEF COMPLAINT – The categories for chief complaint were recoded into External, Internal, Both Internal and External and Other. The Other category contains variables that are neither External nor Internal. This included any cases with Psychotic Problems, Pervasive D/O, Language Def., Cognitive Limits, Medical Conditions, Adjustment D/O, Abuse/Neglect, Eating Related D/O, Elimination D/O, Gender Identity D/O, Relational Problems, School Problems, and Other. Chief Complaint was recoded because at times the individual reported more than one category of a problem. The complaint was based on the first three statements that were reported by the individual.

PSYCHIATRIC MEDICATIONS – This category is included in the Previous Treatment section, determining whether medication was taken previously. These categories were broken down into two main categories. No Medication or Medication Rx’d. The medication category included all cases with answers for: psychiatric medication Rx’d (by whom not noted), psychiatric medications Rx’d by a psychiatrist, psychiatric medications Rx’d by a PCP, or psychiatric medication Rx’d by a psychiatrist and PCP.

SUBSTANCE ABUSE – This category was broken down into two main categories. No Substance Abuse or Substance Abuse. The substance abuse category included all cases with answers for: current active substance abuse, substance abuse in full remission, or substance abuse in partial remission.

DSM – For Axis 1 (primary), Axis 1 (secondary), and Axis III the categories with 10 or more cases were left as their own category. Any diagnoses with a number lower then 10 were combined into an Other category.

For Axis II any categories with 50 or more cases were left as there own categories, any categories under 50 were combined into an Other category. The category of Rule Out means the same as No Diagnosis.

For Axis IV, the Other category includes: Occupational problems, Housing problems, Economic problems, Problems with access to health care services, and Other psychosocial/environmental problems. In this category more than one problem could be chosen, therefore the total number will exceed 893.

CURRENT MEDICATIONS - These categories were broken down into two main categories. No Medication or Medication Rx’d. The medication category included all cases with answers for: psychiatric medication Rx’d (by whom not noted), psychiatric medications Rx’d by a psychiatrist, psychiatric medications Rx’d by a PCP, or psychiatric medication Rx’d by a psychiatrist and PCP.

IMPAIRMENT – The scores under each category of total mental functioning, total emotional functioning, total medical/physical functioning, and total role performance/relationship, etc are now combined into a range instead of indicating the number and percent for each score.

Grand total impairment was a new recoded variable. This was the total sum of, total mental functioning, total emotional functioning, total medical/physical functioning, and total role performance/relationship, etc for the pre form scores.

SEVERITY OF PROBLEMS – This category is based on the clinicians rating of the chief complaint. The clinician determined the range of severity according to the information given for the chief complaint. Note that the clinician may not rate all three categories because there were not three problems defined. The scores under each category of problem 1, problem 2, and problem 3 are now combined into a range instead of indicating the number and percent for each score.

SIBLINGS AND ADULTS IN THE CHILD’S LIFE – This information is based on the siblings and adults living in the home at the time that the form was completed.

JOB TITLE FOR CURRENT CAREGIVER AND OTHER CAREGIVER – This information was based on the 9 categories of the 1975 Hollingshead Scoring System.

EMPLOYMENT FOR CURRENT CAREGIVER AND OTHER CAREGIVER – This variable combined into two categories: yes, employed full or part-time and no, unemployed.

EDUCATION FOR CURRENT CAREGIVER AND OTHER CAREGIVER – The categories of NA and unknown where combined into one category. The categories of 8th grade or less, GED, Some high school, Associates degree or equivalent, Bachelors degree, Masters degree, PhD or MD were all included into an Other category. The coding sheets have eleven categories. Categories were added together to establish the four noted categories.

INVOLVEMENT IN TREATMENT – These categories were based on a range from 1 to 5, 1 being the minimum and 5 being the maximum. The family involvement in treatment, family involvement in the treatment plan, and the client’s involvement in treatment categories are added together to get the total involvement scores.

INTERVENTIONS – The intervention section has the original scored for each category indicated on the table.

An additional two recoded variables were added. The intervention combination variable is the most frequent combinations of interventions. The sum of interventions variable indicates how many people received 1, 2, 3, 4 etc treatments.

DEGREE – The Other category included any category with less than 40 cases. See Appendix III

FACILITY – The Other category included any category with less than 20 cases. See Appendix IV

SESSIONS TO DATE AND TOTAL NUMBER OF OUTPATIENT SESSIONS

The criteria for number of sessions prior to treatment and post treatment were established by the research team. The final decision of acceptable matched sets came from the Project Coordinator in Hartford. As a result these cases are included because the majority of the data were usable.

REASON FOR DISCHARGE – This variable was recoded and broken down into two categories, completed treatment and terminated treatment.

SEX OF CLINICIAN – The data were collected from the Matched Log List and merged into the SPSS database. This item was not included on the original code sheets.

Table 2
Characteristic of Child, Families and Services
Associated with the Health Plan

		Anthem Blue Cross	Healthnet	Community Health	First Choice of CT	ANOVA F
		Blue Shield Blue Care Family	PHS Health Options	Network of CT	Preferred One	
		n = 460	n = 231	n = 140	n = 57	
Variable Name	Variable					
Age	age	10.3	9.8	9.6	10.3	1.29
Sex % male	sex	56.1%	54.4%	60.4%	42.6%	4.83
DCF involvement at pre	dcfinv	1.5^{a}	1.8^{a}	1.6	1.8	3.23*
External chief complaint - % yes	ext	77.0%	73.4%	70.5%	78.9%	3.30
Internal chief complaint - % yes	int	42.0%	40.2%	41.7%	43.9%	0.34
Previous treatment	pretre	0.6	0.7	0.6	0.5	0.89
Medication at pre - % yes	curmedre	21.1%	19.2%	14.4%	16.3%	2.56
Total risk assessment	totrisk	0.3	0.3	0.3	0.1	1.69
Total diagnosis	totdiag	1.5	1.5	1.4	1.4	1.10
Global assessment at pre	gaf	51.8^{a}	51.7^{b}	49.7^{ab}	50.1^{a}	5.19***
Highest global assessment in past year	gafhpy	56.9^{a}	56.3^{b}	53.4^{ab}	53.1^{a}	8.03***
Total mental functioning at pre	totimen	10.4^{a}	10.5^{b}	11.6^{ab}	11.1	4.31**
Total emotional functioning at pre	totiemo	12.9	12.6^{a}	13.7^{b}	13.5	3.82**
Total medical/physical functioning at pre	totimed	6.1	5.9	6.3	6.5	1.20
Total role relationships at pre	totifam	9.1	9.4	9.8	9.4	2.19
Severity of problem 1	prob 1	3.3^{a}	3.1	2.6^{a}	2.7	6.38***
Individual therapy at post -% yes	indthrec	76.7%	79.9%	89.3%	91.2%	15.33**
Family therapy at post - % yes	fctp	77.6%	79.0%	75.7%	63.2%	6.82
Group therapy at post - % yes	grutp	11.1%	7.4%	4.3%	5.3%	8.11*
Medication management at post - % yes	medmanp	12.0%	11.4%	15.7%	14.0%	1.83
Number of sessions requested at pre	numreq	16.8^{a}	17.6	19.0^{a}	19.5	3.62*
Estimated length of treatment episode at pre	los	5.5	5.5	5.9	5.8	0.60

Table 2 continued

		Anthem Blue Cross	Healthnet	Community	First Choice of Preferred One	ANOVA
Variable Name	Variable	Blue Shield/Blue Care Family Plan	PHS Health Options	Health Network of CT	Preferred One	F
Race of child - % white	whiterec	34.7%	48.5%	13.8%	29.8%	44.58***
Race of child - % black	blackrec	22.4%	20.1%	31.5%	49.1%	25.26***
Race of child - % Hispanic	hisparec	35.4%	23.1%	48.5%	10.5%	38.51***
Race of child - % Asian	asianrec	0.2%	0.9%	0.0%	0.0%	2.72
Race of child - % Native American	nativrec	13.0%	0.9%	0.8%	0.0%	1.10
Race of child - % mixed/other	biracrec	5.9%	6.6%	5.4%	10.5%	2.03
Total number of siblings	totsib	2.2	1.9	2.1	2.1	1.33
Total number of adults	totadh	1.5	1.6	1.6	1.6	0.65
DCF involvement at post	dcfinvp	1.2	1.2	1.1	1.3	0.58
Caregiver sex - % females	cgsex	89.8%	86.0%	89.8%	91.1%	5.69
Caregiver age	cgage	36.0	36.3	35.0	39.7	2.25
Caregiver employed - % yes	cgemnewr	59.5%	65.6%	58.6%	46.8%	6.01
Caregiver job title	cgjobt	2.1	1.7	1.3	1.9	2.30
Caregiver education	ceducrec	3.6^{a}	4.0^{ab}	3.2^{bc}	4.2^{c}	6.63***
Total mental functioning at post	totimenp	9.3^{a}	9.3^{b}	10.4^{ab}	10.3	4.58**
Total emotional functioning at post	totiemop	10.3^{a}	10.1^{b}	11.3^{ab}	10.7	3.49*
Total medical/physical functioning at post	totimedp	4.9^{ac}	4.9^{bd}	5.6^{ab}	5.6^{cd}	4.16**
Total role performance, relationship at post	totifamp	8.1^{a}	8.1	8.8^{a}	8.2	2.70*
Global assessment at post	dgaf	57.5	56.8	54.6	56.6	3.56*
Total number of treatments at post	postintc	3.1	3.2	3.3	3.1	0.67
Total number of sessions provided	outsess	10.2^{a}	11.3	12.1	13.6^{a}	3.67*
Family involved in treatment plan	finvtp	3.0	3.2	2.9	2.8	1.64
Family involved in treatment	finvt	3.0	3.1	2.8	2.8	1.43
Client involved in treatment	cinvtp	3.1	3.3	3.2	3.3	1.02
Total family and client involvement	totinv	9.0	9.5	8.9	9.0	1.17
Patient/family outcome - % yes	pfdout	51.0%	45.5%	42.4%	57.1%	5.56
Reason for discharge - % completed Tx	disreac	41.8%	36.1%	35.3%	33.3%	3.87

Table 3
Pre – to Post – Treatment Changes on Key Outcome Measure

Measure	**Pre Form**		**Post Form**		
	Mean	**SD**	**Mean**	**SD**	**t Test**
DCF involvement	1.60	1.31	1.18	1.26	7.89
Global assessment of functioning	51.39	6.32	56.83	8.82	-21.46
Impairment					
Total mental functioning	10.64	3.63	9.52	3.73	9.80
Total emotional functioning	12.96	3.14	10.41	3.74	20.49
Total medical/physical functioning	6.09	2.65	5.04	2.47	12.79
Total role performance, relationship, etc.	9.31	2.72	8.19	2.89	11.67
Grand total impairment	39.01	9.65	33.22	10.97	17.5
Total number of diagnosis	1.48	0.70	1.50	0.86	-.60
	Pre		**Post**		
	Number	**Percent**	**Number**	**Percent**	
DSM diagnosis					4.70
Yes diagnosis	883	98.9	848	95	
No diagnosis	10	1.1	43	95.0	
Total missing	0	0	2	0.2	
Parent's desired outcome met					17.49
Yes	only on post		418	46.8	
No	only on post		443	49.6	

Notes:
DSM – The total numbers and percents were recoded into Yes and No responses. A Yes response determined that there was a diagnosis noted and a No response determined there was no diagnosis noted.
PARENT'S DESIRED OUTCOME – The total numbers and percents were based on just the post (discharge) form. This question was not presented on the pre (admitting) form.

Table 4
Comparison of Outcomes as a Function of Whether the Child/Family Received Versus Not Received a Given Treatment

Treatment Received vs. not Received	**Change in GAF** ***t* test (df=821)**	**Change in Total Functioning** ***t* test (df=859)**	**Comment**
Individual therapy	1.38	1.93*	Less improvement for those who received this treatment than those who did not
Family/couples therapy	2.33*	2.33	Greater improvement if received this treatment
Group therapy	< 1	1.38	No differences
Medication management	2.23*	< 1	Less improvement if received this treatment
Case management contacts	< 1	< 1	No differences
Community resources	1.27	< 1	No differences

Notes: Different forms of individual therapy were provided based on degree of person delivering treatment (e.g., MD vs. nonMD) and duration of the session (e.g., 30 vs. 40/50 min). Individual therapies were combined because they yielded similar outcome effects, as noted in the text. Some treatments (e.g., bibliotherapy) were omitted from the table because the sample size was too small and/or they were never provided alone without another treatment.
* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$