

TEXAS DEPARTMENT OF MENTAL HEALTH AND MENTAL RETARDATION



Report on the Children's Mental Health Clinical Consensus Conference

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October 10, 2003

Background

In 2002, the Texas Department of Mental Health and Mental Retardation (TDMHMR) launched a series of new initiatives to improve the quality of the community mental health service system for children and adolescents. One set of activities involved developing a defined Benefit Plan to make available appropriate levels of services to children and adolescents with varying levels of need. Through this process, TDMHMR hoped to better define:

- Eligibility for defined benefit package case rates;
- Evidence-based services that will be available;
- Utilization management of those services;
- Costs and financing; and
- Expected outcomes and their measurement.

To promote this effort and to ensure that the Benefit Plan would be based solidly upon state of the art research findings on evidence-based practices for children and adolescents, TDMHMR hosted a Consensus Conference on Children's Mental Health on March 27-28, 2003. The purpose of the Consensus Conference was to elicit expert advice from researchers, family advocates, and administrators of mental health services about service models and treatment approaches that had the strongest evidence-base to support them. The Department also wanted to identify key issues related to the feasibility and appropriateness of implementing these services or treatments within local county-based mental health agencies, given the nature and types of problems most common among youth and the diverse range of community contexts in Texas.

Services that were considered high priorities for inclusion in the Benefit Design Plan included:

- Counseling and psychotherapy (e.g., brief group or individual counseling around specific problem areas)
- Skills training (e.g., psychoeducational skills building and social competence training for children and families in individual or group formats; provided in home, school or community settings)
- Day treatment (school or clinic-based)
- Intensive in-home services (including MST, Homebuilders, etc)
- Therapeutic foster care
- Intensive case management
- Wraparound planning
- Flexible community supports (e.g., mentoring, respite, child care, therapeutic camps)
- Crisis services, medication and medication management, and child/family education and support are also available but will not be a focus of the consensus conference because parallel State activities are already underway to address these services.

Description of the Consensus Conference and Consensus Plan Development

A two-day invitational meeting was convened by TDMHMR on March 27 & 28, 2003. The Conference consisted of two parts. Day One involved a series of expert presentations by national leaders on evidence for the effectiveness of services provided through the Benefit Plan. The experts (listed below) were asked to present major research findings on (a) the effectiveness of these services and types of outcomes expected for children and adolescents with a range of mental health problems (e.g., for whom are the services effective; indications as to amount, duration and intensity of service needed to obtain outcomes; provider training or expertise needed; level and strength of the evidence); (b) key essential elements or core components within the service model that contribute to positive outcomes; (c) services that are ineffective.

In addition, a panel of key stakeholder respondents, including family advocates, practitioners, administrators and youth, spoke about their perspectives on the major findings and on the implications of these findings for implementing these services in their communities.

Day Two involved the development of a Consensus Plan to assist TDMHMR in achieving its short and long-term goals in designing the Benefit Plan of mental health services for youth. The Consensus Plan development process involved a series of activities. First, a Consensus Panel consisting of all of the expert panel presenters from Day 1 and a subset of family advocates, youth and community center administrators and practitioners from the respondent panels met to develop consensus around a set of specific questions that had been previously distributed. The specific questions were:

- (a) Which of the evidence-based interventions described on Day 1 are appropriate for which types of children and youth (e.g., for which target problems)? What interventions are harmful?
- (b) What service intensity (e.g., amount and duration) and provider expertise (e.g., training, supervision and monitoring) are needed to deliver each of these interventions effectively?
- (c) Are there core components or active ingredients either within the identified EBP interventions or across the range of services that are needed to deliver services effectively (e.g., family engagement; treatment alliance; participatory planning; consumer choice)?
- (d) What organizational or structural supports are needed to ensure that the EBP interventions or core components of them can be systematically embedded within the service system (e.g., training and supervision, outcomes monitoring, reimbursement, interagency linkages)?
- (e) What should be the short and long-term goals for guiding and implementing the Benefit Design for youth and what should be the next steps in achieving these goals?

Second, to facilitate group discussion and focus, a Consensus Survey was developed by the Conference planners prior to the conference and distributed to the Expert Panel to elicit their perspectives on the salience or importance of specific characteristics of evidence-based practices for a range of children's mental health problems. More specifically, the survey instrument was

designed to identify areas of consensus about specific elements of the Benefit Design Plan. The purposes of the survey were (1) to identify specific clinical service or treatment models for specific populations of children and families that should be considered candidates for the Benefit Design project of TDMHMR; (2) to identify *inappropriate* models; (3) to identify areas in which agreement, disagreement, or uncertainty exists among the consensus panel; and (4) to map these recommended program models and practices against the needs and capacity of the State.

The results of the survey were presented in the morning of Day Two and used to structure a series of consensus recommendations to TDMHMR about the Benefit Plan. The instrument, analysis of the responses to it, and the Consensus Recommendations themselves are described below.

Summary of Presentations

Six nationally recognized experts on evidence-based practices delivered presentations during Day One for children. The content of these presentations reflected state of the art research summaries on the major services considered for inclusion in the Benefit Plan. The 6 presentations are summarized here.

John Weisz, Ph.D., UCLA

The first speaker, John Weisz, summarized research on the effectiveness of psychosocial treatments for children and adolescents. He described the results of meta-analyses and other reviews, including a new review conducted for the MacArthur Foundation, of empirically examined psychosocial therapies for children. Dr. Weisz pointed out that close to 6% of youth receive mental health care, according to recent estimates from the National Institute of Mental Health (2001). Furthermore, the annual costs are close to 12 billion. Research support primarily from NIMH on youth mental health amounts to more than \$300 million per year. Yet despite this investment, research findings seldom find their way into practice. Most of the practices that have been tested and found to be effective sit idly on academic shelves.

A new initiative of the MacArthur Foundation, called “Linking Science and Practice to Improve Youth Mental Health, is seeking to close the science-practice gap and improve the quality of both services and service delivery for children and adolescents. This initiative, led by Dr. Weisz, will involve two complementary multi-site studies designed to address the challenges of adapting evidence-based technologies to organizational systems. The two studies include a Clinic Treatment Project to test two alternative methods of delivering evidence-based practices within public community-based mental health clinics, using training and supervision procedures designed for the settings and users; and a Clinic Systems Project to investigate the organizational, system, and payment issues that influence the ability of providers and clinics to use evidence-based practices. The findings of these two projects will be used to plan a later phase of the initiative, which will be disseminating evidence-based practices to a broad range of clinics, providers, youths, and families, and assessing the impact.

Dr. Weisz also reviewed results of several major meta-analyses indicating that treatments used with children and adolescents now include more than 500 different named psychotherapies, plus hundreds of interventions individually adapted or developed by therapists. He pointed out that the research base on youth mental health care now includes more than 1500 studies on the effects

of psychotherapies for youth, and more than 400 trials on psychotropic medications with youth. In general, the evidence shows quite substantial beneficial effects of youth treatment, when scientifically supported treatment procedures are used. Other evidence, in the psychosocial field, shows generally weak effects of usual clinical care that is not guided by empirical evidence.

Finally, Dr. Weisz reviewed studies indicating that the current practice of psychotherapy in real world clinics does not reflect treatments that have been tested in clinical trials. Further, in pediatric practice, the use of multiple pharmaceutical agents and off-label use (e.g., prescribing of medications that lack FDA-approved safety and efficacy testing in the pediatric age range) is more common than not. The American Academy of Pediatrics has estimated that 80% of all medication usage in minors is off-label. Dr. Weisz concluded that a major challenge for policy planning was to close the research to practice gap.

Bruce Chorpita, Ph.D. of the University of Hawaii

Dr. Chorpita described the major state efforts being undertaken in Hawaii to identify evidence-based practices and core practice components across the range of evidence-based psychosocial treatments for youth. The Hawaii model has been widely cited as an exemplary and innovative state effort to identify key practice components that can be built into the training, supervision, and daily practices of all clinicians across the State, and to examine the implementation processes as these services are deployed into schools.

Dr. Chorpita described the background to this initiative. In 1994, the State of Hawaii settled a class action lawsuit brought before Federal court on behalf of children with special needs, with the central argument being that children were not being provided with appropriate mental health services under federal disability law. The Felix-Waihee Consent Decree (named for the index plaintiff) was established to ensure that the State would provide all services deemed necessary in order for children with mental health problems to be able to benefit from their free and appropriate education. These events crystallized in a series of activities to identify evidence-based practices for youth and to create a state agenda to evaluate dissemination and effectiveness of those evidence based treatments. A Task Force (the Empirical Basis to Services Task Force) was created at the State level to identify the most promising treatments using methodology similar to that used by national review groups (e.g., APA) and to change practice on a large scale. The Task Force concluded that the distribution of existing lists of EBPs would not ensure delivery of those treatments, and that an equally robust process to evaluate the relevance of research findings needed to be undertaken

Dr. Chorpita explained that some of the major concerns noted as a result of the review of EBPs were geography, appropriateness of treatments for delivery in rural settings, and the appropriateness of some treatments with very culturally diverse groups. These factors necessitated that practice guidelines be developed that could be delivered with flexibility across diverse settings. In addition, the Task Force concluded that to be successful in disseminating the set of EBPs that were selected, attention to the “real world” aspects of existing clinical research was needed so that barriers to dissemination could be identified and removed.

Finally, Dr. Chorpita described the methodologies for identifying core components within research based psychosocial therapies and analyses that were used to derive 11 core components that appear to constitute that “active ingredients” of these therapies. He emphasized how these components have not yet been rigorously examined, but that one goal of the MacArthur Foundation project, described by Dr. Weisz, was to do so. In his concluding remarks, Dr.

Chorpita described the challenges in implementing evidence-based practices, including issues of definition (e.g., differences among treatments vs preventive interventions vs services); diagnostic reification and the absence of “markers”; the value and status of combination treatments (e.g., including pharmacologic) for conceptualizing the evidence-base; and differences between evidence-based *practices* and evidence-based *treatments*. Suggestions were made for a disciplined approach to advancing a yoked research and policy agenda for children’s mental health.

Mark Weist, Ph.D., Director, National Center on School Mental Health, University of Maryland, Baltimore

Dr. Weist described state of the art research findings on the effectiveness of school-based and school-linked mental health services. He identified key models of effective school-based and school-linked mental health interventions and models for embedding universal, targeted and selected interventions in schools. He reviewed programs that target improvement in social skills and competencies. Based on the work of his National Center on School Mental Health, he described models for improving the quality of school-based services and barriers that impede delivery.

Dr. Weist described how, in his School Mental Health Program, all clinicians have been taught to build interventions based on evidence of positive impact into their curricula, and described the major challenges to doing so. For example, school-based clinicians generally operate in schools with insufficient levels of administrative support. Yet most research-based programs are labor intensive and require considerable resources to implement. In addition, funding for EBPs is uneven, inconsistent, and fragmentary, resulting in reliance of the programs on fee-for-service funding, which can be a major barrier to their uptake. Dr. Weist also described national trends indicating that for evidence-based programs to be successfully implemented in schools, significant implementation support, in the form of training, technical assistance, and resources are essential

Finally, Dr. Weist described the results of a literature review of evidence-based programs that can be applied in school-based mental health settings (Schaeffer, Weist, & Goldstein, 2002). He emphasized that major gaps still exist, especially involving disruptive behaviors among high school youth and a weak research base on formal programs for specific disorders. Dr. Weist urged greater breadth in discussions about evidence-based practices and inclusion of interventions to reduce stress/risk factors, to enhance protective factors, and to train youth in skills that have been broadly documented to lead to positive outcomes (e.g., relaxation, self-control, problem-solving).

Barbara J. Burns, Duke University School of Medicine

The next set of presentations focused more broadly on community-based service interventions, rather than diagnostic-specific treatments. Dr. Burns summarized the state of research on the effectiveness of community-based service interventions, which are designed for youth with SED. The service interventions with the strongest research base included a range of home based models, such as intensive in home services, Multisystemic Therapy; out of home placement models, such as Therapeutic Foster Care, and community based services, such as wraparound, respite, mentoring, family support. Variations in the strength of the evidence and other models that are not effective (e.g., homebuilders model of family preservation) were also described.

Dr. Burns presented a brief summary of the leading efforts that have positioned evidence-based practice into the national limelight. The meta-analytic studies of John Weisz and colleagues that documented effect sizes for child psychotherapy comparable to those in adult studies; the development and publication of criteria for evidence-based interventions by the Society of Clinical Psychology, American Psychological Association; and the Surgeon General's Report on Mental Health are considered to be significant turning points that have enabled the creation of many reviews of the evidence base for youth and communication of it to the clinical and general public. These events have also been complemented by the spread of practice guidelines developed by the American Academy of Child and Adolescent Psychiatry.

Dr. Burns emphasized that considerable challenges remain in understanding how best to implement evidence-based practice (EBP) for children and families. Lack of consensus exists about the criteria for evidence and appropriate application of it continues to be fraught with difficulties. She emphasized the importance of understanding the context of real world practice, the constraints that impede adoption, and the importance of attending to both relevance and efficiency.

Dr. Burns also described a six-step treatment development model first proposed by Dr. Weisz, called the Deployment-Focused Model (1999; 2003). This model was intended to encourage the development of treatments within the context and setting for which they were ultimately to be delivered. Two further stages were added by Hoagwood, Burns, and Weisz (2000) to include goodness-of-fit within organizations, practice settings, and communities (Step 7); and dissemination, quality, and sustainability (Step 8). The goal of this model is to begin develop relevant, sustainable and tailored treatments that will fit within the practice constraints of different practice settings

Dr. Burns concluded by pointing out that natural experiments to implement EBP for youth are occurring in at least half a dozen states, but that empirical knowledge about how best to embed these models within complex state systems is extremely limited. Dr. Burns identified some questions that can be used to guide dissemination efforts within states and offered these for consideration in Texas. They include:

- What criteria (e.g., level of evidence, effectiveness) will be used for intervention selection?
- Which interventions meet criteria for dissemination?
- Are the stakeholders (consumers, clinicians, administrators, policymakers) who would endorse implementation in agreement about changes in practice that will occur?
- Are the settings (e.g., home, school, clinic) where interventions are to be provided truly receptive and the conditions conducive to implementation?
- Is there fiscal support to cover the costs of intervention implementation?
- Is there a process to support practice change and are adequate resources for provision of training, ongoing supervision, and consultation in place?
- How much adaptation of the intervention is expected and how will this be monitored?
- Is there a clear plan for tracking client outcomes?

Mary Evans, Ph.D., University of South Florida

Dr. Evans continued the discussion about evidence-based service programs by describing models of intensive case management, the research base on them, and the “case for caseness”—i.e., whether case management services are more effective if bundled or unbundled.

Dr. Evans described how case management is a common intervention but is also quite variable: different definitions, components, and models exist. A commonly cited definition of case management, developed by Austin (1983), suggests that “case management is a mechanism for linking and coordinating segments of a service-delivery system within a single agency or involving several providers, to ensure the most comprehensive program for meeting an individual client’s need for care.” Other definitions exist, but all emphasize a common set of functions and purposes, which are to mobilize, coordinate, and maintain an array of services and resources to meet the needs of individuals over time.

Dr. Evans reviewed the core functions of case management: assessment, service planning, service implementation, service coordination, monitoring and evaluation, and advocacy. Dr. Evans then described the processes of case management, which are accomplished primarily through relationships. The forming of collaborative relationships with other professionals is key to creating a coordinated planning and decision making set of activities. Dr. Evans also pointed out how therapeutic relationships are also central to delivery of effective case management services. Although case management is not a unitary function, it is defined with a set of core functions, and within these core functions rests a great deal of flexibility about roles and functions served.

Dr. Evans pointed out that the research base on the impact of bundled vs unbundled case management services is not definitive. However the core aspect of case management is coordination and alliance, both of which necessitate continuity with a common provider. Consequently it appears that the issue as to whether services are bundled or unbundled matters less than does the extent to which continuity of services are available to the family seeking them.

Finally, Dr. Evans described the variety of organizational arrangements within which services can be delivered. One approach emphasizes the outcomes and content of service coordination, whereas another approach emphasizes the structure and process of how such coordination takes place. She emphasized how organizations that provide case management programs need to be clear as to the goals of their program. Within the current climate of case management for children with mental health needs, renewed attention is being focused on outcomes, accountability, and organizational characteristics such as culture, climate, and work attitudes that predict outcomes. Research on organizational context has important implications for case management programs, which are by definition focused on linkages among agencies.

Peter S. Jensen, M.D., Columbia University, Director, Center for the Advancement of Children’s Mental Health

Dr. Jensen described models for linking medication management strategies to other services in order to improve outcomes. He presented data on some of the most effective strategies for linking medication management to community-based services, and identified core elements of medication management that have been shown to improve patient and family outcomes. These

include services such as patient and family education; engagement; adherence; self-management of side effects; and linkage with primary care.

Dr. Jensen described the challenges that persist despite the presence of a strong research base on psychotherapy effectiveness. While this body of research has yielded impressive evidence for the effectiveness of several forms of cognitive behavior therapy for childhood internalizing disorders (anxiety, depression) and behavior therapies for externalizing disorders (conduct and oppositional-disorders; ADHD, etc.), nevertheless significant gaps remain in identifying the “active ingredients” that underpin actual behavior change and therapeutic effectiveness. Across this large body of research, a range of causal mechanisms for behavior change have been advanced, ranging from learning mechanisms, skill acquisition, enhanced motivation, changes in one’s causal attributions, increased self-efficacy, improved interpersonal relations, etc. In most instances, specific techniques have been developed, purportedly able to effect these specific changes via some proposed mechanism of action, all based in the underlying theory.

In all of this research activity, however, Dr. Jensen pointed out that it is rare for the elements of scientific “proof” to be linked to theory, mechanisms for change, and therapeutic outcomes. In the absence of such unifying theories, a number of competing explanations might equally be invoked to explain change. For example, the concept of “nonspecific therapeutic factors,” the effects of attention, positive regard, and a therapeutic alliance, are usually not examined explicitly nor ruled out as possible causal explanations. In those few studies that have explored this alternative explanation, findings do not unequivocally support the notions of “empirical” or “evidence-based” treatments, as currently conceptualized.

Dr. Jensen urged caution in accepting uncritically the concepts of “efficacy” and “evidence-based,” and challenged the audience to ask more difficult questions of the empirical base. Questions include has the study used control groups comparable in intensity of exposure to the supposed active treatment such that the specific effect of the therapy can be identified? Such studies are needed if conclusions about a given therapy’s effect beyond compassion, friendliness, and attention are to be drawn.

After the expert panel presentations, panels of key stakeholders provided their perspectives on the research that had been presented. Both family and clinical directors discussed the benefits and disadvantages of the service models and delivery mechanisms (e.g., school vs. home vs. clinic) based on their experiences and the experiences of other consumers. They also identified, from their perspective, the key ingredients for treatment or service effectiveness.

Consensus Plan Development: Day Two

A Consensus Panel consisting of all of the expert panel presenters from Day 1 and a subset of family advocates, youth and community center administrators and practitioners from the respondent panels met in executive session on Day 2 to develop consensus around a set of questions (listed below). These questions were provided to all panelists in advance. The questions were:

- Which of the evidence-based interventions described on Day 1 are appropriate for which types of children and youth (e.g., for which target problems)? What interventions are harmful?

- What service intensity (e.g., amount and duration) and provider expertise (e.g., training, supervision and monitoring) are needed to deliver each of these interventions effectively?
- Are there core components or active ingredients either within the identified EBP interventions or across the range of services that are needed to deliver services effectively (e.g., family engagement; treatment alliance; participatory planning; consumer choice)?
- What organizational or structural supports are needed to ensure that the EBP interventions or core components of them can be systematically embedded within the service system (e.g., training and supervision, outcomes monitoring, reimbursement, interagency linkages)?
- What should be the short and long-term goals for guiding and implementing the Benefit Design for youth and what should be the next steps in achieving these goals?

Consensus Process

The consensus panel experts were asked to complete a survey prior to the conference, summarizing their recommendations in response to questions (a) and (b) above. A summary of these results was provided at the beginning of Day Two, to begin the consensus discussion. (The survey instrument and analyses of their responses are provided in the appendix, below). In addition, prior to the conference, TDMHMR provided summary data on typical clusters of children presenting to the TDMHMR system; state requirements for each of the service models that are the focus of the consensus process; training, certification, and licensing requirements for the services within the Benefit Design; and any additional information about potential limitations that may affect delivery of EBPs to youth. All of this material was designed to elicit substantive discussion and consensus recommendations that would assist TDMHMR in developing its Benefit Plan.

The survey sample consisted solely of the experts who participated in Day Two of the Conference. This included the national expert presenters, the family and clinical practice stakeholders, and the key policy-makers from the State. The sample size for the survey was small, consisting only of these expert panelists (N=12). The results of the survey were designed to facilitate group discussion on key issues around which consensus might be developed, not to reflect representative perspectives from all stakeholders in the State.

Consensus Recommendations

A series of recommendations were developed during the day and are summarized below. A set of general recommendations were also generated. These general issues cut across all aspects of the Benefit Design process and so are summarized separately. In addition, a set of guiding principles for development of the Benefit Design were identified and agreed upon by the Consensus Panelists, and these are described separately below.

Guiding Principles for the Implementation of Evidence-Based Interventions in Texas

- Providers are expected to provide evidence-based interventions and designated best practices.

- Providers are expected to avoid practices that have no evidence base.
- Providers are encouraged to use the least restrictive interventions in determining levels of care.
- For every child in the TDMHMR service system, identification of mental health needs should be based on assessment of diagnosis, functioning, and family capacity (i.e., strengths, access to support, resources, impact on family). These factors define intervention type and level of care.
- Intervention type is defined by diagnosis. Level of care for the interventions is defined by functioning and family capacity.
- The ultimate goals of all interventions are always to maximize child and family functioning.
- The evidence-base is constantly changing, so updating of the evidence-base is needed on a regular and consistent basis

A. CONSENSUS RECOMMENDATIONS ON SPECIFIC INTERVENTIONS FOR SPECIFIC TARGET POPULATIONS

The following recommendations are divided into 3 categories:

- **evidence** refers to recommendations that are based on scientific studies using rigorous methods based upon which these conclusions have been drawn;
- **consensus** refers to recommendations that reflect the expert opinion of the consensus members;
- **ideas/issues** refers to relevant questions, strategies, or considerations that the developers of the Benefit Design may wish to consider

1. TARGET POPULATION: Children/Adolescents with Disruptive Behavior Disorders

EVIDENCE: All things being equal, children or adolescents with externalizing problems (i.e., disruptive behavior disorders, aggressive and violent behaviors, or impulsive behaviors) require initial and ongoing behavior management skills and support (i.e., parent management skills)

CONSENSUS: KEY COMPONENTS: The following are the core components that constitute this type of intervention:

- providing clear directions and limit setting
- use of rewards
- antecedent management
- praise and ignoring
- time-out and other consequences

These skills are transferable and could be used by teachers, case managers, or other providers.

CONSENSUS: Possible strategies to implement behavior management skills include purchasing manuals, making Texas-version videotapes of EBP interventions, or providing ongoing training and supervision of specific intervention models.

CONSENSUS: Children who have not responded adequately to these psychotherapeutic interventions should be referred for a medication evaluation.

CONSENSUS: For youth with severe and long-term disruptive behaviors, consideration needs to be given to more intensive longer duration interventions, with behavioral and systemic components, such as MST, Treatment Foster Care (for children or adolescents who cannot live at home and for whom other in-home services have been attempted) or Functional Family Therapy. These are ranked in order of evidence.

CONSENSUS: CORE COMPONENTS: For the above-mentioned interventions, core components have not yet been identified

IDEAS/ISSUES: TDMHMR may want to consider co-funding with juvenile justice or child welfare programs at either local or state levels.

IDEAS/ISSUES: It will be important that intensive and ongoing training be provided to clinicians on the chosen select manuals. Strategies for accomplishing this were identified earlier.

IDEAS/ISSUES: The possibility of tele-medicine delivery of either core components or of specific intervention models should be considered and piloted.

2. TARGET POPULATION: *Children and Adolescents with Depression*

EVIDENCE: All things being equal, children and adolescents with depression require cognitive-behavioral therapies or interpersonal therapies (CBT or IPT)

EVIDENCE: Adding a parent component to CBT strengthens the effect.

CONSENSUS: Children or adolescents who have not responded adequately to these psychotherapeutic interventions should be referred for a medication evaluation.

CONSENSUS: CORE COMPONENTS:

FOR IPT: problem solving, activity selection, skill building (e.g., selecting any skill, teaching, practicing), social skills, psychoeducation

FOR CBT: all of the above plus relaxation and cognitive restructuring (e.g., identifying and altering depressive thoughts)

IDEAS/ISSUES: TDMHMR may want to consider the value of offering relaxation training alone, as 2 studies have demonstrated impressive effects from this component of the CBT intervention

3. TARGET POPULATION: *Children and Adolescents with Anxiety*

EVIDENCE: All things being equal, children and adolescents with anxiety require CBT

EVIDENCE: Adding a parent component to CBT strengthens the effect

CONSENSUS: For children who have not responded adequately to these psychotherapeutic interventions, they should be referred for a medication evaluation.

CONSENSUS: CORE COMPONENTS:

CBT: exposure, psychoeducation, and cognitive restructuring (e.g., identifying and altering anxious thoughts); self-monitoring and rewards

Other possible components include behavioral modeling and exposure, desensitization

For phobias: exposure is the core component

B. RECOMMENDATIONS ABOUT 4 EBP SERVICE INTERVENTIONS APPROPRIATE ACROSS TARGET POPULATIONS (i.e., day treatment, intensive case management, intensive home-based services, and parent support services)

CONSENSUS: The following EBP service interventions may be most appropriate in situations where the target population of youth has two or more of the following risks:

- Comorbidity (identify primary disorder)
- Multiple system involvement
- Substance abuse
- Parental mental illness/substance abuse
- Child abuse and trauma
- Mental retardation
- Multiple hospitalizations
- Limitations in caregiver capacity
- Chronic physical illnesses
- Recent suicide attempts
- School expulsion
- Families with logistics problems or difficulties making it to the clinics

1. DAY TREATMENT

CONSENSUS: No strong evidence currently exists in support of day treatment. There are many different models. There is no clear determination of for whom it is most appropriate

2. INTENSIVE CASE MANAGEMENT

CONSENSUS: For any combination of 2 or 3 of the above-mentioned risks (depending on intensity and mixture) intensive case management may be appropriate

CONSENSUS: The models for ICM should be more clearly defined. In particular, models should include a combination of coordination, responsiveness to crisis, network building, skill building around skill management, coordinating problem solving for family.

CONSENSUS: ICM managers should be trained on the same set of behavior management skills as referenced above (under target population: disruptive behavior disorders). It will be important to provide booster sessions

CONSENSUS: It is important that the case manager becomes part of team when treatment is being provided

CONSENSUS: It may be advisable to impose time limits on the delivery of case management to improve its impact and effects.

CONSENSUS: There are no evidence-based ratios, but the consensus of the participants was that the recommended ratios be 1-12 if the child is involved in more than one system and is identified as SED; and 1-30 if the caseload consists of children receiving few other services.

3. HOMEBUILDERS

CONSENSUS: This intervention model could be strengthened if combined with other functions (i.e., case management with crisis training). For example, a combination of case management and crisis intervention services would strengthen the model.

CONSENSUS: The model is most appropriate for multi-stressed families in crisis.

CONSENSUS: In general the intervention should be provided for from 4-6 weeks to 90 days

CONSENSUS: It is important that continuity of the crisis case manager and the team be provided.

CONSENSUS: It is important that behavior management skills training be provided to all case managers

CONSENSUS: This model may be most appropriate for urban populations

4. FAMILY SUPPORT SERVICES

CONSENSUS: Family to family support (i.e., creating a network of families to provide support to others families during crises, facilitating access to services, and providing ongoing support or liaison services within schools or clinics) is an important intervention for families with multiple risks. Several models are available for providing this intervention to families of multi-system youth.

CONSENSUS: It is important that families be paid to provide family support services.

IDEAS/ISSUES: TDMHMR may want to identify billing options for funding this service (i.e., identifying family support workers as staff for skills training)

C. CONSENSUS RECOMMENDATIONS FOR LEVELS OF CARE

CONSENSUS: Case management services should be made available across levels of care. In other words, it should be able to travel across levels.

IDEAS/ISSUES: To determine need for change in levels to more intensive level, TDMHMR could specify when escalation in need for services requires a case review to assess need for more intensive levels of care. For example, if a youth needs more than 1 medication management service per week, or more than one psychosocial treatment per week, or more than one case management service per week, then the youth might need to move from a less intensive to a more intensive level of care.

IDEAS/ISSUES: 3 levels have been used in other states (e.g., Hawaii) to good effect and might be considered by TDMHMR. The 3 levels are: (a) less intensive outpatient, which can also be delivered in the school. This usually involves 1 or 2 contacts/week at school or office. (2) Home and community based level, which involved multiple contacts per week in multiple settings; and (3) Out of home, which could include therapeutic foster care.

IDEAS/ISSUES: A strategy for determining levels of care could be to designate monetary value of each service and attach budgeting to the combination of interventions needed for each unique family. For example, an analysis of the real costs of the combinations of services used by individual families could be used to budget packages with different service combinations.

IDEAS/ISSUES: Estimated costs for providing some of the intervention models described above are as follows:

- CBT: \$1,000 per youth per treatment completion
- Behavior management per family: \$1,000 per treatment completion
- Therapeutic Foster Care: \$25,000 per youth and family per service completion
- Multisystemic Therapy: \$5,000/youth and family per service completion

Other General Issues/Ideas

During the discussion, other ideas and suggestions were made by the participants. These are summarized below.

- If change in practices is to occur, then attention to the contingencies of care and the incentives that currently exist or that could be put into place needs to occur
- Issues related to training and support for it from the State and for how the utilization review will connect to the Benefit Design should be carefully considered
- Specificity around core elements for the selected interventions will need to be provided
- The State may want to consider including specific trauma-related interventions for children and adolescents, as there is a growing knowledge base and some of it overlaps with other evidence-based practices for other kinds of emotional/behavioral problems

- Hard choices will have to be made. Not all children and adolescents may be able to be served appropriately. It may be necessary to prioritize the most needy population
- More specificity regarding discharge criteria and when it is OK to let children go is needed
- Specificity about the number of sessions and training requirements for the selected intervention models will be needed.
- All training materials will need to be translated
- The State's levels of care (mild, moderate, and severe) could be augmented with clearer definition of categories and more specificity about types of services to be included in each. In particular, attention to the content of the services within each of the levels would be groundbreaking and would provide useful direction to providers.

D. FINAL RECOMMENDATIONS FROM INDIVIDUAL PARTICIPANTS

Peter Jensen: Deliver services in a flexible way, encouraging flexibility and creativity among providers. Provide case management and behavior management, along with medication management, and arrange it so you can serve as many kids as possible. If the youth/family are not at risk, develop a mechanism for turning off the service.

Bruce Chorpita: If TDMHMR is going to develop evidence-based policy, one caveat is to ensure that there is ongoing dialogue with providers and families. It would be a mistake to take the Hawaii Blue Page and mail it out. To create ongoing change, it is essential to partner actively and frequently with providers and families. Hold out money for training and supervision.

John Weisz: Consider the incentive system. Ask providers what circumstances would motivate you to adopt evidence-based practices. If you were the head of a provider agency, what would make you want to do it. Introduce the concept, consider sustainability over time, and assess the factors that at a provider level would make it work or not.

Barbara J Burns: What TDMHMR is trying to do is a complete revolution, because you are wanting to upgrade basic clinical care to state of the art and also wanting to provide support services for your most needy kids and families. This is a huge and important change. Find out where the money is going. Involve cross system planning. Hold out money for training and supervision.

Regenia Hicks: Create incentive funds to jumpstart cross system change for evidence-based practices.

Mark Weist: Don't let the work of management get in the way of advocacy. Pay attention to school based services and risk reduction.

Mary Evans: Hold out money for training and supervision training and supervision. Fund parents organizations to work with you. Provide ongoing family support services. Use state level data to model service use.

Veronica Sanchez: Provision of school based mental health services can reduce travel costs.

Debbie Hyatt: Provide support for advocacy. The costs for transportation to meet face to face with lobbyists can be extremely high, especially when meetings get cancelled at the last minute.

Vijay Ganju: Pay attention to how the Benefit Design is communicated, and how it is presented. Make sure that it is not presented as a wish list.

1) A youth with severe and persistent aggression

Treatments and Treatment Components

Cognitive behavior therapy	1	2	3	4	5	6	7	8	9
Supportive counseling	1	2	3	4	5	6	7	8	9
<i>Interpersonal therapy</i>	1	2	3	4	5	6	7	8	9
<i>Social skills training</i>	1	2	3	4	5	6	7	8	9
<i>Parent management training</i>	1	2	3	4	5	6	7	8	9
(e.g., Behavior therapy)									
<i>Family therapy</i>	1	2	3	4	5	6	7	8	9
<i>Medication management</i>	1	2	3	4	5	6	7	8	9

Service Models

Family support	1	2	3	4	5	6	7	8	9
Psychoeducation	1	2	3	4	5	6	7	8	9
Day treatment	1	2	3	4	5	6	7	8	9
Case management	1	2	3	4	5	6	7	8	9
Wraparound	1	2	3	4	5	6	7	8	9
Multi-systemic therapy	1	2	3	4	5	6	7	8	9
In-home services other than MST	1	2	3	4	5	6	7	8	9
(e.g., Homebuilders)									
Respite	1	2	3	4	5	6	7	8	9
Other (Please specify)									

2. Impulsivity/hyperactivity:

Treatments and Treatment Components

Cognitive behavior therapy	1	2	3	4	5	6	7	8	9
Supportive counseling	1	2	3	4	5	6	7	8	9
<i>Interpersonal therapy</i>	1	2	3	4	5	6	7	8	9
<i>Social skills training</i>	1	2	3	4	5	6	7	8	9
<i>Parent management training</i>	1	2	3	4	5	6	7	8	9
(e.g., Behavior therapy)									
<i>Family therapy</i>	1	2	3	4	5	6	7	8	9
<i>Medication management</i>	1	2	3	4	5	6	7	8	9

Service Models

Family support	1	2	3	4	5	6	7	8	9
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Psychoeducation	1	2	3	4	5	6	7	8	9
Day treatment	1	2	3	4	5	6	7	8	9
Case management	1	2	3	4	5	6	7	8	9
Wraparound	1	2	3	4	5	6	7	8	9
Multi-systemic therapy	1	2	3	4	5	6	7	8	9
In-home services other than MST (e.g., Homebuilders)	1	2	3	4	5	6	7	8	9
Respite	1	2	3	4	5	6	7	8	9
Other (Please specify)									

3. Non-compliance/oppositional behavior:

Treatments and Treatment Components

Cognitive behavior therapy	1	2	3	4	5	6	7	8	9
Supportive counseling	1	2	3	4	5	6	7	8	9
<i>Interpersonal therapy</i>	1	2	3	4	5	6	7	8	9
<i>Social skills training</i>	1	2	3	4	5	6	7	8	9
<i>Parent management training</i> (e.g., Behavior therapy)	1	2	3	4	5	6	7	8	9
<i>Family therapy</i>	1	2	3	4	5	6	7	8	9
<i>Medication management</i>	1	2	3	4	5	6	7	8	9

Service Models

Family support	1	2	3	4	5	6	7	8	9
Psychoeducation	1	2	3	4	5	6	7	8	9
Day treatment	1	2	3	4	5	6	7	8	9
Case management	1	2	3	4	5	6	7	8	9
Wraparound	1	2	3	4	5	6	7	8	9
Multi-systemic therapy	1	2	3	4	5	6	7	8	9
In-home services other than MST (e.g., Homebuilders)	1	2	3	4	5	6	7	8	9
Respite	1	2	3	4	5	6	7	8	9
Other (Please specify)									

4. Anxiety

Treatments and Treatment Components

Cognitive behavior therapy	1	2	3	4	5	6	7	8	9
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Supportive counseling	1	2	3	4	5	6	7	8	9
<i>Interpersonal therapy</i>	1	2	3	4	5	6	7	8	9
<i>Social skills training</i>	1	2	3	4	5	6	7	8	9
<i>Parent management training</i>	1	2	3	4	5	6	7	8	9
(e.g., Behavior therapy)									
<i>Family therapy</i>	1	2	3	4	5	6	7	8	9
<i>Medication management</i>	1	2	3	4	5	6	7	8	9

Service Models

Family support	1	2	3	4	5	6	7	8	9
Psychoeducation	1	2	3	4	5	6	7	8	9
Day treatment	1	2	3	4	5	6	7	8	9
Case management	1	2	3	4	5	6	7	8	9
Wraparound	1	2	3	4	5	6	7	8	9
Multi-systemic therapy	1	2	3	4	5	6	7	8	9
In-home services other than MST	1	2	3	4	5	6	7	8	9
(e.g., Homebuilders)									
Respite	1	2	3	4	5	6	7	8	9
Other (Please specify)									

5. Depression or dysthymia

Treatments and Treatment Components

Cognitive behavior therapy	1	2	3	4	5	6	7	8	9
Supportive counseling	1	2	3	4	5	6	7	8	9
<i>Interpersonal therapy</i>	1	2	3	4	5	6	7	8	9
<i>Social skills training</i>	1	2	3	4	5	6	7	8	9
<i>Parent management training</i>	1	2	3	4	5	6	7	8	9
(e.g., Behavior therapy)									
<i>Family therapy</i>	1	2	3	4	5	6	7	8	9
<i>Medication management</i>	1	2	3	4	5	6	7	8	9

Service Models

Family support	1	2	3	4	5	6	7	8	9
Psychoeducation	1	2	3	4	5	6	7	8	9
Day treatment	1	2	3	4	5	6	7	8	9
Case management	1	2	3	4	5	6	7	8	9
Wraparound	1	2	3	4	5	6	7	8	9

Multi-systemic therapy	1	2	3	4	5	6	7	8	9
In-home services other than MST (e.g., Homebuilders)	1	2	3	4	5	6	7	8	9
Respite	1	2	3	4	5	6	7	8	9
Other (Please specify)									

6. How important are the following factors in determining the need for services?

Functional impairment of the youth	1	2	3	4	5	6	7	8	9
Clinical symptom severity	1	2	3	4	5	6	7	8	9
Single parent status	1	2	3	4	5	6	7	8	9
Parental income	1	2	3	4	5	6	7	8	9
Caregiver capacity	1	2	3	4	5	6	7	8	9
Parental mental illnesses	1	2	3	4	5	6	7	8	9
Parental substance abuse	1	2	3	4	5	6	7	8	9
Parental abuse or neglect	1	2	3	4	5	6	7	8	9

Readiness for discharge

7. For the treatments you rated as very appropriate (i.e., assigned ratings of 7, 8, or 9) for any of the behavioral or emotional problems listed above (e.g., aggression, impulsivity, oppositionality, anxiety, depression), please rate the appropriateness of each of the following factors in determining **readiness for discharge**.

<i>Completion of the course of treatment</i>	1	2	3	4	5	6	7	8	9
Clinical judgment of improvement	1	2	3	4	5	6	7	8	9
Parent reports of improvement	1	2	3	4	5	6	7	8	9
Teacher reports of improvement	1	2	3	4	5	6	7	8	9
Youth reports of improvement	1	2	3	4	5	6	7	8	9
Improvement as measured by change in clinical or functional status on standardized scales	1	2	3	4	5	6	7	8	9

Training

8. For the following treatments and services, please circle the minimal level of training you believe to be appropriate to deliver it.

Cognitive behavior therapy	HS	BA	MA/MSW	Ph.D	MD
Supportive counseling	HS	BA	MA/MSW	Ph.D	MD
<i>Interpersonal therapy</i>	HS	BA	MA/MSW	Ph.D	MD
<i>Social skills training</i>	HS	BA	MA/MSW	Ph.D	MD
<i>Parent management training</i> (e.g., Behavior therapy)	HS	BA	MA/MSW	Ph.D	MD
<i>Family therapy</i>	HS	BA	MA/MSW	Ph.D	MD
<i>Medication management</i>	HS	BA	MA/MSW	Ph.D	MD

Service Models

Family support	HS	BA	MA/MSW	Ph.D	MD
Psychoeducation	HS	BA	MA/MSW	Ph.D	MD

Day treatment	HS	BA	MA/MSW	Ph.D	MD
Case management	HS	BA	MA/MSW	Ph.D	MD
Wraparound	HS	BA	MA/MSW	Ph.D	MD
Multi-systemic therapy	HS	BA	MA/MSW	Ph.D	MD
In-home services other than MST (e.g., Homebuilders)	HS	BA	MA/MSW	Ph.D	MD
Respite	HS	BA	MA/MSW	Ph.D	MD

Supervision

9. Assume that a provider has at least a BA level of training. What is the minimal frequency of supervision you consider to be appropriate for each of the following treatments or services:

Cognitive behavior therapy	once/month	twice/month	once/week	twice/week
Supportive counseling	once/month	twice/month	once/week	twice/week
<i>Interpersonal therapy</i>	<i>once/month</i>	<i>twice/month</i>	<i>once/week</i>	<i>twice/week</i>
<i>Social skills training</i>	<i>once/month</i>	<i>twice/month</i>	<i>once/week</i>	<i>twice/week</i>
<i>Parent management training</i> (e.g., <i>Behavior therapy</i>)	<i>once/month</i>	<i>twice/month</i>	<i>once/week</i>	<i>twice/week</i>
<i>Family therapy</i>	<i>once/month</i>	<i>twice/month</i>	<i>once/week</i>	<i>twice/week</i>
<i>Medication management</i>	<i>once/month</i>	<i>twice/month</i>	<i>once/week</i>	<i>twice/week</i>

Service Models

Family support	once/month	twice/month	once/week	twice/week
Psychoeducation	once/month	twice/month	once/week	twice/week
Day treatment	once/month	twice/month	once/week	twice/week
Case management	once/month	twice/month	once/week	twice/week
Wraparound	once/month	twice/month	once/week	twice/week
Multi-systemic therapy	once/month	twice/month	once/week	twice/week
In-home services other than MST (e.g., Homebuilders)	once/month	twice/month	once/week	twice/week
Respite	once/month	twice/month	once/week	twice/week

Instruments and Scales

10. To what degree are the following instruments appropriate for determining **eligibility** for youth with aggression, impulsivity, oppositionality, anxiety or depression?

Child Behavior Checklist (CBCL):	1	2	3	4	5	6	7	8	9	no opinion
Youth Outcomes Questionnaire (YOQ):	1	2	3	4	5	6	7	8	9	no opinion
Structured Diagnostic Interviews (i.e., DISC, CAPA, Kiddie-SADS)	1	2	3	4	5	6	7	8	9	no opinion
Strengths & Difficulties Questionnaire (SDQ)	1	2	3	4	5	6	7	8	9	no opinion
Clinical Global Impressions (CGI)	1	2	3	4	5	6	7	8	9	no opinion
Child/Adolescent Functioning Scale (CAFAS)	1	2	3	4	5	6	7	8	9	no opinion
Columbia Impairment Scale (CIS)	1	2	3	4	5	6	7	8	9	no opinion
Ohio Scales	1	2	3	4	5	6	7	8	9	no opinion
Other: Please specify										

11. To what degree are the following instruments appropriate for determining **outcomes** for youth with aggression, impulsivity, oppositionality, anxiety, or depression?

Child Behavior Checklist (CBCL):	1	2	3	4	5	6	7	8	9	no opinion
Youth Outcomes Questionnaire (YOQ):	1	2	3	4	5	6	7	8	9	no opinion
Structured Diagnostic Interviews (i.e., DISC, CAPA, Kiddie-SADS)	1	2	3	4	5	6	7	8	9	no opinion
Strengths & Difficulties Questionnaire (SDQ)	1	2	3	4	5	6	7	8	9	no opinion
Clinical Global Impressions (CGI)	1	2	3	4	5	6	7	8	9	no opinion
Child/Adolescent Functioning Scale (CAFAS)	1	2	3	4	5	6	7	8	9	no opinion
Columbia Impairment Scale (CIS)	1	2	3	4	5	6	7	8	9	no opinion
Ohio Scales	1	2	3	4	5	6	7	8	9	no opinion
Other: Please specify										

THANK YOU!

APPENDIX 2
ANALYSES OF RESPONSES TO TREATMENT AND SERVICES CONSENSUS
SURVEY

AGGRESSION

TREATMENT MODELS								
Respondents		CBT	Support Counseling	IPT	Social Skills Train	Parent Manage Train	Family Therapy	Medication
PROVIDER	Mean	9.0000	6.0000	6.6667	8.0000	8.0000	7.6667	6.0000
	N	3	3	3	2	2	3	2
	Std. Deviation	.00000	3.46410	4.04145	.00000	1.41421	.57735	1.41421
	Median	9.0000	8.0000	9.0000	8.0000	8.0000	8.0000	6.0000
CONSUMER/FAMILY ADVOCATE	Mean	6.6667	5.6667	5.3333	7.3333	8.3333	6.3333	6.3333
	N	3	3	3	3	3	3	3
	Std. Deviation	.57735	1.15470	.57735	1.15470	1.15470	1.15470	2.30940
	Median	7.0000	5.0000	5.0000	8.0000	9.0000	7.0000	5.0000
RESEARCHER	Mean	5.5000	2.4000	3.8333	7.1667	8.5000	5.5000	6.0000
	N	6	5	6	6	6	6	6
	Std. Deviation	2.88097	1.34164	2.78687	.98319	.83666	1.64317	2.52982
	Median	5.5000	3.0000	3.5000	7.0000	9.0000	5.0000	5.5000
TOTAL	Mean	6.6667	4.2727	4.9167	7.3636	8.3636	6.2500	6.0909
	N	6	5	5	6	6	5	6
	Std. Deviation	.40825	2.58844	2.28035	3.12517	2.73252	2.48998	2.92689

SERVICE MODELS									
Respondent		Family Support	Psych Ed	Day Treatment	Case Manage	Wraparound	MST	In-Home	Respite
PROVIDER	Mean	8.0000	9.0000	4.6667	6.6667	6.3333	7.6667	8.0000	4.6667
	N	2	3	3	3	3	3	2	3
	Std. Deviation	1.41421	.00000	1.15470	1.15470	2.30940	.57735	1.41421	1.15470
	Median	8.0000	9.0000	4.0000	6.0000	5.0000	8.0000	8.0000	4.0000
CONSUMER/FAMILY ADVOCATE	Mean	8.0000	4.6667	8.3333	5.0000	9.0000	8.3333	7.0000	8.0000
	N	3	3	3	3	3	3	3	3
	Std. Deviation	1.73205	.57735	1.15470	.00000	.00000	1.15470	1.73205	1.73205
	Median	9.0000	5.0000	9.0000	5.0000	9.0000	9.0000	8.0000	9.0000
RESEARCHER	Mean	6.8333	6.1667	5.1667	7.1667	7.0000	8.6667	6.0000	6.5000
	N	6	6	6	6	6	6	6	6
	Std. Deviation	.98319	1.32916	1.94079	1.60208	1.54919	.81650	1.54919	1.37840
	Median	7.0000	6.0000	4.5000	8.0000	7.5000	9.0000	7.0000	7.0000
TOTAL	Mean	7.3636	6.5000	5.8333	6.5000	7.3333	8.3333	6.6364	6.4167
	N	11	12	12	12	12	12	11	12
	Std. Deviation	1.28629	1.88294	2.12489	1.50756	1.77525	.88763	1.62928	1.78164
	Median	7.0000	6.0000	5.5000	6.5000	8.0000	9.0000	7.0000	6.5000

IMPULSIVITY/HYPERACTIVITY TREATMENTS

TREATMENT MODELS								
Respondents		CBT	Support Counseling	IPT	Social Skills Train	Parent Manage Train	Family Therapy	Medication
PROVIDER	Mean	7.0000	5.6667	1.0000	7.0000	9.0000	5.6667	8.6667
	N	3	3	1	1	3	3	3
	Std. Deviation	3.46410	4.04145	.	.	.00000	.57735	.57735
CONSUMER/ FAMILY ADVOCATE	Median	9.0000	8.0000	1.0000	7.0000	9.0000	6.0000	9.0000
	Mean	6.3333	5.0000	5.3333	7.6667	8.3333	4.3333	6.3333
	N	3	3	3	3	3	3	3
RESEARCHER	Std. Deviation	1.15470	.00000	.57735	.57735	1.15470	1.15470	2.30940
	Median	7.0000	5.0000	5.0000	8.0000	9.0000	5.0000	5.0000
	Mean	4.3333	2.6667	3.3333	6.0000	8.6667	5.0000	8.8333
TOTAL	N	6	6	6	6	6	6	6
	Std. Deviation	3.01109	1.63299	2.25093	1.41421	.51640	2.28035	.40825
	Median	5.0000	2.5000	3.5000	6.0000	9.0000	5.5000	9.0000
TOTAL	Mean	5.5000	4.0000	3.7000	6.6000	8.6667	5.0000	8.1667
	N	12	12	10	10	12	12	12
	Std. Deviation	2.84445	2.48633	2.16282	1.34990	.65134	1.70561	1.52753
	Median	7.0000	4.5000	4.0000	7.0000	9.0000	5.0000	9.0000

SERVICE MODELS									
Respondent		Family Support	Psych Ed	Day Treatment	Case Manage	Wraparound	MST	In-Home	Respite
PROVIDER	Mean	8.3333	8.0000	4.6667	7.0000	6.3333	7.6667	8.3333	6.0000
	N	3	2	3	3	3	3	3	2
	Std. Deviation	.57735	1.41421	1.15470	1.73205	2.30940	.57735	.57735	1.41421
CONSUMER/ FAMILY ADVOCATE	Median	8.0000	8.0000	4.0000	6.0000	5.0000	8.0000	8.0000	6.0000
	Mean	5.3333	5.3333	3.6667	4.0000	5.6667	5.6667	5.0000	7.6667
	N	3	3	3	3	3	3	3	3
RESEARCHER	Std. Deviation	.57735	.57735	2.88675	1.73205	1.15470	1.15470	.00000	2.30940
	Median	5.0000	5.0000	2.0000	3.0000	5.0000	5.0000	5.0000	9.0000
	Mean	5.6667	6.3333	3.5000	4.5000	3.8333	3.6667	3.3333	5.3333
TOTAL	N	6	6	6	6	6	6	6	6
	Std. Deviation	2.94392	2.80476	2.16795	2.73861	2.31661	1.63299	1.96638	2.80476
	Median	6.0000	7.0000	4.0000	4.5000	4.5000	4.0000	4.0000	5.5000
TOTAL	Mean	6.2500	6.3636	3.8333	5.0000	4.9167	5.1667	5.0000	6.0909
	N	12	11	12	12	12	12	12	11
	Std. Deviation	2.37888	2.24823	2.03753	2.44949	2.23437	2.12489	2.52262	2.50817
	Median	6.5000	7.0000	4.0000	5.5000	5.0000	5.0000	5.0000	7.0000

ODD

TREATMENT MODELS								
Respondents		CBT	Support Counseling	IPT	Social Skills Train	Parent Manage Train	Family Therapy	Medication
PROVIDER	Mean	9.0000	5.3333	6.0000	8.0000	8.3333	8.0000	3.5000
	N	3	3	3	2	3	3	2
	Std. Deviation	.00000	2.88675	3.46410	.00000	.57735	.00000	2.12132
CONSUMER/ FAMILY ADVOCATE	Median	9.0000	7.0000	8.0000	8.0000	8.0000	8.0000	3.5000
	Mean	8.3333	6.6667	6.0000	8.3333	8.3333	5.6667	5.6667
	N	3	3	3	3	3	3	3
RESEARCHER	Std. Deviation	1.1547	.57735	.00000	1.15470	1.15470	.57735	1.15470
	Median	9.0000	7.0000	6.0000	9.0000	9.0000	6.0000	5.0000
	Mean	4.3333	2.3333	2.0000	5.8333	8.8333	6.0000	2.6667
TOTAL	N	6	6	6	6	6	6	6
	Std. Deviation	2.3380	1.63299	1.09545	1.83485	.40825	1.41421	2.33809
	Median	4.0000	2.0000	2.0000	5.5000	9.0000	6.0000	2.0000
TOTAL	Mean	6.5000	4.1667	4.0000	6.9091	8.5833	6.4167	3.6364
	N	12	12	12	11	12	12	11
	Std. Deviation	2.8123	2.58785	2.66288	1.86840	.66856	1.37895	2.29228
	Median	7.0000	4.0000	3.0000	8.0000	9.0000	6.0000	3.0000

SERVICE MODELS									
Respondent		Family Support	Psych Ed	Day Treatment	Case Manage	Wraparound	MST	In-Home	Respite
PROVIDER	Mean	8.0000	8.3333	4.3333	6.6667	7.0000	9.0000	7.5000	6.0000
	N	2	3	3	3	3	3	2	1
	Std. Deviation	1.41421	.57735	.57735	1.15470	1.73205	.00000	.70711	.
CONSUMER/ FAMILY ADVOCATE	Median	8.0000	8.0000	4.0000	6.0000	6.0000	9.0000	7.5000	6.0000
	Mean	8.0000	5.3333	7.6667	5.3333	8.3333	8.3333	8.0000	8.0000
	N	3	3	3	3	3	3	3	3
RESEARCHER	Std. Deviation	1.73205	.57735	.57735	.57735	1.15470	1.15470	1.73205	1.73205
	Median	9.0000	5.0000	8.0000	5.0000	9.0000	9.0000	9.0000	9.0000
	Mean	5.5000	5.5000	3.2000	4.5000	4.1667	5.3333	4.5000	4.8333
TOTAL	N	6	6	5	6	6	6	6	6
	Std. Deviation	2.73861	2.50998	2.16795	3.01662	2.78687	2.33809	2.34521	2.56255
	Median	6.0000	7.0000	4.0000	5.0000	4.5000	5.0000	4.5000	5.5000
TOTAL	Mean	6.6364	6.1667	4.7273	5.2500	5.9167	7.0000	6.0000	5.9000
	N	11	12	11	12	12	12	11	10
	Std. Deviation	2.50091	2.16725	2.41209	2.30119	2.81096	2.41209	2.52982	2.55821
	Median	7.0000	7.0000	4.0000	6.0000	6.0000	8.0000	7.0000	6.5000

ANXIETY

TREATMENT MODELS								
Respondents		CBT	Support Counseling	IPT	Social Skills Train	Parent Manage Train	Family Therapy	Medication
PROVIDER	Mean	9.0000	5.3333	6.6667	7.0000	7.3333	8.0000	8.0000
	N	3	3	3	2	3	3	3
	Std. Deviation	.00000	2.88675	4.04145	.00000	.57735	.00000	1.73205
CONSUMER/ FAMILY ADVOCATE	Median	9.0000	7.0000	9.0000	7.0000	7.0000	8.0000	9.0000
	Mean	7.0000	6.6667	6.0000	6.6667	7.0000	7.0000	7.0000
	N	3	3	3	3	3	3	3
RESEARCHER	Std. Deviation	.00000	.57735	.00000	.57735	.00000	.00000	.00000
	Median	7.0000	7.0000	6.0000	7.0000	7.0000	7.0000	7.0000
	Mean	8.8333	3.8000	3.2000	4.8333	5.3333	4.8000	5.1667
TOTAL	N	6	5	5	6	6	5	6
	Std. Deviation	.00000	.57735	.00000	.57735	.00000	.00000	.00000
	Mean	8.4167	5.0000	4.9091	5.7273	6.2500	6.2727	6.3333
TOTAL	N	12	11	11	11	12	11	12
	Std. Deviation	.00000	.57735	.00000	.57735	.00000	.00000	.00000
	Mean	8.4167	5.0000	4.9091	5.7273	6.2500	6.2727	6.3333

SERVICE MODELS									
Respondent		Family Support	Psych Ed	Day Treatment	Case Manage	Wraparound	MST	In-Home	Respite
PROVIDER	Mean	7.6667	7.6667	2.0000	7.0000	6.0000	6.3333	8.5000	6.0000
	N	3	3	3	3	3	3	2	2
	Std. Deviation	1.15470	1.15470	1.73205	1.73205	.00000	2.88675	.70711	1.41421
CONSUMER/ FAMILY ADVOCATE	Median	7.0000	7.0000	1.0000	6.0000	6.0000	8.0000	8.5000	6.0000
	Mean	8.0000	6.6667	8.0000	5.3333	8.0000	8.3333	7.6667	7.0000
	N	3	3	3	3	3	3	3	3
RESEARCHER	Std. Deviation	1.73205	.57735	1.73205	.57735	1.73205	1.15470	2.30940	3.46410
	Median	9.0000	7.0000	9.0000	5.0000	9.0000	9.0000	9.0000	9.0000
	Mean	5.3333	6.6667	2.6667	3.0000	1.8000	1.6667	2.1667	2.8333
TOTAL	N	6	6	6	6	5	6	6	6
	Std. Deviation	2.06559	.81650	1.63299	2.60768	.83666	1.21106	1.47196	1.83485
	Mean	5.5000	6.5000	2.5000	2.5000	2.0000	1.0000	1.5000	2.5000
TOTAL	Mean	6.5833	6.9167	3.8333	4.5833	4.6364	4.5000	4.8182	4.5455
	N	12	12	12	12	11	12	11	11
	Std. Deviation	2.10878	.90034	2.94906	2.60971	2.97566	3.42451	3.40053	2.87623
TOTAL	Median	7.0000	7.0000	3.5000	5.0000	6.0000	3.5000	4.0000	5.0000

DEPRESSION

TREATMENT MODELS								
Respondents		CBT	Support Counseling	IPT	Social Skills Train	Parent Manage Train	Family Therapy	Medication
PROVIDER	Mean	8.0000	8.3333	7.3333	6.0000	5.3333	7.3333	7.6667
	N	3	3	3	3	3	3	3
	Std. Deviation	1.73205	1.15470	1.15470	.00000	1.15470	1.15470	2.30940
	Median	9.0000	9.0000	8.0000	6.0000	6.0000	8.0000	9.0000
CONSUMER/FAMILY ADVOCATE	Mean	7.0000	6.6667	6.0000	5.3333	8.0000	6.6667	8.3333
	N	3	3	3	3	3	3	3
	Std. Deviation	.00000	.57735	.00000	.57735	1.73205	.57735	1.15470
	Median	7.0000	7.0000	6.0000	5.0000	9.0000	7.0000	9.0000
RESEARCHER	Mean	8.3333	5.6667	7.3333	6.5000	2.8000	4.4000	6.6667
	N	6	6	6	6	5	5	6
	Std. Deviation	1.03280	1.96638	2.06559	.54772	2.68328	2.19089	2.58199
	Median	9.0000	5.5000	8.0000	6.5000	1.0000	5.0000	7.5000
ALL Respondents	Mean	7.9167	6.5833	7.0000	6.0833	4.9091	5.8182	7.3333
	N	12	12	12	12	11	11	12
	Std. Deviation	1.16450	1.83196	1.59545	.66856	2.98176	2.04050	2.18812
	Median	8.0000	6.5000	6.5000	6.0000	6.0000	6.0000	8.5000

SERVICE MODELS									
Respondent		Family Support	Psych Ed	Day Treatment	Case Manage	Wraparound	MST	In-Home	Respite
PROVIDER	Mean	8.3333	9.0000	6.0000	7.0000	6.3333	6.3333	8.6667	6.0000
	N	3	1	3	3	3	3	3	3
	Std. Deviation	.57735	.	1.73205	1.73205	.57735	2.88675	.57735	.00000
	Median	8.0000	9.0000	7.0000	6.0000	6.0000	8.0000	9.0000	6.0000
CONSUMER/FAMILY ADVOCATE	Mean	8.0000	8.3333	8.0000	5.3333	8.0000	8.3333	7.0000	7.0000
	N	3	3	3	3	3	3	3	3
	Std. Deviation	1.73205	1.15470	1.73205	.57735	1.73205	1.15470	3.46410	3.46410
	Median	9.0000	9.0000	9.0000	5.0000	9.0000	9.0000	9.0000	9.0000
RESEARCHER	Mean	5.0000	6.8333	2.3333	2.6667	3.1667	2.8333	2.5000	2.8000
	N	5	6	6	6	6	6	6	5
	Std. Deviation	1.58114	.98319	1.03280	1.50555	2.40139	2.56255	1.97484	1.30384
	Median	5.0000	7.0000	2.0000	3.0000	2.5000	1.5000	1.5000	3.0000
ALL RESPONDENTS	Mean	6.7273	7.5000	4.6667	4.4167	5.1667	5.0833	5.1667	4.8182
	N	11	10	12	12	12	12	12	11
	Std. Deviation	2.10195	1.26930	2.83912	2.31432	2.82307	3.28795	3.48590	2.63887
	Median	7.0000	7.0000	4.0000	5.0000	6.0000	6.0000	5.0000	4.0000

FACTORS of IMPORTANCE

Determine Need for Services

Respondent		Impairment	Symptoms	Single Parent	Income	Parent Capacity	Parent Mental III	Parent Substance Abuse	Child Abuse
Provider	Mean	9.0000	8.3333	5.6667	5.6667	7.6667	6.0000	6.3333	9.0000
	N	3	3	3	3	3	2	3	3
	Std. Deviation	.00000	.57735	.57735	.57735	1.15470	1.41421	1.15470	.00000
	Median	9.0000	8.0000	6.0000	6.0000	7.0000	6.0000	7.0000	9.0000
Consumer/ Family Advocate	Mean	9.0000	8.3333	2.3333	7.6667	8.6667	8.6667	8.6667	9.0000
	N	3	3	3	3	3	3	3	3
	Std. Deviation	.00000	1.15470	.57735	2.30940	.57735	.57735	.57735	.00000
	Median	9.0000	9.0000	2.0000	9.0000	9.0000	9.0000	9.0000	9.0000
Researcher	Mean	9.0000	8.1667	3.6667	1.6667	6.8333	6.8333	7.6667	9.0000
	N	6	6	6	6	6	6	6	6
	Std. Deviation	.00000	1.32916	3.20416	.81650	2.04124	2.04124	1.21106	.00000
	Median	9.0000	9.0000	2.5000	1.5000	7.0000	7.0000	7.5000	9.0000
Total	Mean	9.0000	8.2500	3.8333	4.1667	7.5000	7.1818	7.5833	9.0000
	N	12	12	12	12	12	11	12	12
	Std. Deviation	.00000	1.05529	2.51661	2.94906	1.67874	1.83402	1.31137	.00000
	Median	9.0000	9.0000	3.0000	4.0000	7.5000	7.0000	7.5000	9.0000

Determine Discharge

Respondent		Complete Treatment	Clinical Judge	Parent Report	Teacher Report	Youth Report	Change Scale Score
Provider	Mean	4.5000	7.0000	7.0000	7.5000	7.0000	8.0000
	N	2	2	3	2	2	3
	Std. Deviation	3.53553	.00000	1.73205	.70711	.00000	.00000
	Median	4.5000	7.0000	6.0000	7.5000	7.0000	8.0000
Consumer/Family Advocate	Mean	7.6667	6.3333	8.3333	7.0000	8.3333	6.0000
	N	3	3	3	3	3	3
	Std. Deviation	2.30940	.57735	1.15470	.00000	1.15470	1.73205
	Median	9.0000	6.0000	9.0000	7.0000	9.0000	5.0000
Researcher	Mean	6.8333	7.1667	7.3333	7.3333	7.3333	8.3333
	N	6	6	6	6	6	6
	Std. Deviation	2.40139	2.99444	1.36626	1.36626	1.36626	.81650
	Median	7.0000	9.0000	7.5000	7.5000	7.5000	8.5000
Total	Mean	6.6364	6.9091	7.5000	7.2727	7.5455	7.6667
	N	11	11	12	11	11	12
	Std. Deviation	2.54058	2.16585	1.38170	1.00905	1.21356	1.37069
	Median	7.0000	7.0000	7.5000	7.0000	7.0000	8.0000

MINIMAL LEVEL OF TRAINING Delivery of Treatments

Respondents		CBT	Support Counseling	IPT	Social Skills Train	Parent Train	Family Therapy	Medication Manage
Provider	Mean	3.0000	3.0000	3.0000	2.0000	2.0000	3.0000	5.0000
	N	3	1	3	3	3	3	3
	Std. Deviation	.00000	.	.00000	.00000	.00000	.00000	.00000
	Median	3.0000	3.0000	3.0000	2.0000	2.0000	3.0000	5.0000
Consumer/Family Advocate	Mean	2.6667	2.6667	2.0000	1.3333	1.6667	3.0000	5.0000
	N	3	3	3	3	3	3	3
	Std. Deviation	.57735	.57735	.00000	.57735	1.15470	.00000	.00000
	Median	3.0000	3.0000	2.0000	1.0000	1.0000	3.0000	5.0000
Researcher	Mean	3.0000	2.5000	3.0000	2.5000	2.8333	3.0000	4.8333
	N	6	6	6	6	6	6	6
	Std. Deviation	.00000	.54772	.00000	.54772	.40825	.00000	.40825
	Median	3.0000	2.5000	3.0000	2.5000	3.0000	3.0000	5.0000
Total	Mean	2.9167	2.6000	2.7500	2.0833	2.3333	3.0000	4.9167
	N	12	10	12	12	12	12	12
	Std. Deviation	.28868	.51640	.45227	.66856	.77850	.00000	.28868
	Median	3.0000	3.0000	3.0000	2.0000	2.5000	3.0000	5.0000

Delivery of Services

Respondent		Family Support	Psych Ed	Day Treatment	Case Manage	Wraparound	MST	In-Home	Respite
Provider	Mean	1.6667	1.6667	2.0000	2.0000	2.0000	2.6667	2.3333	1.0000
	N	3	3	3	3	3	3	3	2
	Std. Deviation	.57735	.57735	.00000	.00000	.00000	.57735	1.15470	.00000
	Median	2.0000	2.0000	2.0000	2.0000	2.0000	3.0000	3.0000	1.0000
Consumer/ Family Advocate	Mean	1.6667	3.0000	3.0000	2.0000	2.3333	3.0000	2.0000	1.6667
	N	3	3	3	3	3	3	3	3
	Std. Deviation	1.15470	.00000	2.00000	1.00000	1.15470	.00000	1.00000	.57735
	Median	1.0000	3.0000	3.0000	2.0000	3.0000	3.0000	2.0000	2.0000
Researcher	Mean	2.3333	2.3333	2.5000	2.3333	2.5000	2.6667	2.3333	1.6667
	N	6	6	6	6	6	6	6	6
	Std. Deviation	.51640	.51640	.54772	.51640	.54772	.51640	.51640	.51640
	Median	2.0000	2.0000	2.5000	2.0000	2.5000	3.0000	2.0000	2.0000
Total	Mean	2.0000	2.3333	2.5000	2.1667	2.3333	2.7500	2.2500	1.5455
	N	12	12	12	12	12	12	12	11
	Std. Deviation	.73855	.65134	1.00000	.57735	.65134	.45227	.75378	.52223
	Median	2.0000	2.0000	2.0000	2.0000	2.0000	3.0000	2.0000	2.0000

MINIMAL FREQUENCY OF SUPERVISION

Delivery of Treatment

.08 = 1x month .17 = 2x monthly .25 = 1x weekly .50 = 2x weekly

Respondents		CBT	Support Counseling	IPT	Social Skills Train	Parent Train	Family Therapy	Medication Manage
Provider	Mean	.1700	.1700	.1700	.0800	.1400	.1700	.0800
	N	2	2	2	3	3	2	2
	Std. Deviation	.00000	.00000	.00000	.00000	.05196	.00000	.00000
	Median	.1700	.1700	.1700	.0800	.1700	.1700	.0800
Consumer/Family Advocate	Mean	.1367	.1367	.1100	.1400	.1700	.1933	.1933
	N	3	3	3	3	3	3	3
	Std. Deviation	.09815	.09815	.05196	.05196	.00000	.09815	.09815
	Median	.0800	.0800	.0800	.1700	.1700	.2500	.2500
Researcher	Mean	.2633	.1667	.2217	.1517	.2367	.3467	.1980
	N	6	6	6	6	6	6	5
	Std. Deviation	.13441	.07607	.06940	.08377	.14362	.17907	.18417
	Median	.2500	.1700	.2500	.1250	.2100	.3750	.0800
Total	Mean	.2118	.1591	.1818	.1308	.1958	.2727	.1730
	N	11	11	11	12	12	11	10
	Std. Deviation	.12082	.07092	.07400	.06815	.10867	.15888	.14008
	Median	.2500	.1700	.1700	.0800	.1700	.2500	.0800

Delivery of Services

.08 = 1x month .17 = 2x monthly .25 = 1x weekly .50 = 2x weekly

Respondent		Family Support	Psych Ed	Day Treatment	Case Manage	Wraparound	MST	In-Home	Respite
Provider	Mean	.0800	.1367	.1933	.0800	.1400	.2500	.2500	.0800
	N	3	3	3	3	3	1	3	2
	Std. Deviation	.00000	.09815	.09815	.00000	.05196	.	.00000	.00000
	Median	.0800	.0800	.2500	.0800	.1700	.2500	.2500	.0800
Consumer/ Family Advocate	Mean	.0800	.1367	.2767	.1667	.2800	.1967	.1667	.1400
	N	3	3	3	3	3	3	3	3
	Std. Deviation	.00000	.09815	.21127	.08505	.19053	.04619	.08505	.05196
	Median	.0800	.0800	.2500	.1700	.1700	.1700	.1700	.1700
Researcher	Mean	.1933	.1517	.2633	.1800	.2633	.3200	.3067	.1533
	N	6	6	6	6	6	6	6	6
	Std. Deviation	.16513	.08377	.19398	.08343	.19398	.14283	.15397	.06470
	Median	.1933	.1517	.2633	.1800	.2633	.3200	.3067	.1533
Total	Mean	.1367	.1442	.2492	.1517	.2367	.2760	.2575	.1364
	N	12	12	12	12	12	10	12	11
	Std. Deviation	.12608	.08218	.16774	.07987	.16626	.12358	.12520	.05870
	Median	.0800	.0800	.2500	.1250	.1700	.2500	.2500	.1700

APPROPRIATENESS OF MEASURES

TO DETERMINE ELIGIBILITY INTAKE APPROPRIATENESS RATINGS

Respondent		CBCL	YOQ	DISC	SDQ	CGI	CAFAS	CIS	OHIO
Provider	Mean	8.0000	.0000	8.3333	3.0000	5.3333	8.3333	.0000	2.6667
	N	3	3	3	3	3	3	3	3
	Std. Deviation	.00000	.00000	.57735	5.19615	4.61880	.57735	.00000	4.61880
	Median	8.0000	.0000	8.0000	.0000	8.0000	8.0000	.0000	.0000
Consumer/ Family Advocate	Mean	6.0000	1.6667	7.0000	4.6667	6.3333	7.0000	6.3333	4.0000
	N	3	3	3	3	3	3	3	3
	Std. Deviation	1.00000	2.88675	2.00000	4.04145	1.52753	1.00000	1.15470	3.60555
	Median	6.0000	.0000	7.0000	7.0000	6.0000	7.0000	7.0000	5.0000
Researcher	Mean	7.3333	2.0000	8.1667	4.3333	6.3333	5.1667	2.1667	1.1667
	N	6	6	6	6	6	6	6	6
	Std. Deviation	1.86190	3.09839	.98319	3.50238	2.06559	2.78687	3.37145	2.85774
	Median	7.5000	.0000	8.5000	5.5000	6.5000	5.5000	.0000	.0000
Total	Mean	7.1667	1.4167	7.9167	4.0833	6.0833	6.4167	2.6667	2.2500
	N	12	12	12	12	12	12	12	12
	Std. Deviation	1.52753	2.57464	1.24011	3.72847	2.53909	2.39159	3.33939	3.38781
	Median	7.5000	.0000	8.0000	5.5000	6.5000	7.0000	.0000	.0000

APPROPRIATENESS OF MEASURES for OUTCOMES

Respondent		CBCL	YOQ	DISC	SDQ	CGI	CAFAS	CIS	OHIO
Provider	Mean	6.6667	.0000	8.0000	3.0000	5.3333	8.3333	.0000	3.0000
	N	3	3	3	3	3	3	3	3
	Std. Deviation	2.30940	.00000	.00000	5.19615	4.61880	.57735	.00000	5.19615
	Median	8.0000	.0000	8.0000	.0000	8.0000	8.0000	.0000	.0000
Consumer/ Family Advocate	Mean	6.3333	1.6667	7.0000	4.6667	7.3333	7.0000	6.6667	4.3333
	N	3	3	3	3	3	3	3	3
	Std. Deviation	1.15470	2.88675	2.00000	4.04145	2.08167	1.00000	1.52753	4.04145
	Median	7.0000	.0000	7.0000	7.0000	8.0000	7.0000	7.0000	5.0000
Researcher	Mean	6.5000	2.0000	6.0000	4.0000	4.6667	4.6667	2.3333	1.3333
	N	6	6	6	6	6	6	6	6
	Std. Deviation	3.39116	3.09839	3.52136	3.52136	3.07679	2.94392	3.66970	3.26599
	Median	7.5000	.0000	7.0000	4.5000	5.0000	6.0000	.0000	.0000
Total	Mean	6.5000	1.4167	6.7500	3.9167	5.5000	6.1667	2.8333	2.5000
	N	12	12	12	12	12	12	12	12
	Std. Deviation	2.54058	2.57464	2.66714	3.72847	3.20511	2.62274	3.58870	3.80191
	Median	7.0000	.0000	8.0000	4.5000	6.0000	7.0000	.0000	.0000

APPENDIX 3

Cluster analysis of children served by TDMHMR during FY2001-FY2002.

Sample

Children who received services from TDMHMR during FY 2001 and FY 2002 were included in the sample. The most recent admission was used for children with multiple admissions. There were a total of 41,168 unduplicated client records included in the analysis. There were 27,201 males (66%) and 13,967 females (34%). There were 17,069 Whites (41.5%), 15,259 Hispanics (37.1%) and 8,118 Blacks (19.7). The average age was 12.2 (SD = 3.6). There were 2,769 children ages 0 to 5 (6.7%); 18,666 children ages 6 to 12 (45.3%); 19,531 adolescents ages 13 to 17 (47.4%); and 202 youth ages 18 and over (0.5%).

Method

SAS proc fastclus was used. A total of 5 clusters were initially requested but clusters with less than 25 persons were discarded. This resulted in 4 clusters.

Variables

The majority of variables were from the admission assessment. However, the diagnostic information was from the most recent diagnoses was available within an episode of care. Variables not scored as 0 versus 1 were standardized. Approximately 65 individual variables were used for the cluster analysis. The variables included were:

- Demographic variables: (age*, gender, 3 race/ethnicity variables, caregiver capacity*).
- 4 Referral source variables: (Family/Self, School, CPS/PRS, TYC or JPC).
- Insurance variables: Medicaid and CHIP enrollment at intake.
- Juvenile Justice Population Indicator
- Enrollment in Special Education for Emotional Disability
- At risk for placement
- Total number of previous State Hospital Admissions*
- Community functioning and Problem Behavior Rating Scales (A total of 14 scales, 7 scales for current functioning and 7 scales for previous history. Each scale is rated from 0, indicating no problems to 5 indicating severe problems. The 7 areas rated include: MH or SA Treatment History, Danger to Others, Danger to Self, School Problems, Family Problems, Drug or Alcohol use and Juvenile Justice Involvement)*
- CBCL scores (t-scores for Total score, Internalizing, Externalizing)*

- The first four Axis I diagnoses and the first two Axis II diagnoses (categorized into 11 children's DSM diagnostic groups scored as 0 versus 1 indicators for: ADHD, Conduct Disorder, MR or other Developmental, Bipolar, Major Depression, Substance Abuse, Anxiety, Schizophrenia, Other Psychoses, Other Mood Disorders, Personality Disorders, and Other Childhood Conditions).
- Total number of Axis I Diagnoses*
- Indicators for each of the 9 potential psychosocial problem areas from Axis IV
- Axis V GAF score*

**scores that were standardized*

Results

A variety of cluster analyses solutions were examined but a four-cluster solution appeared to be the most interpretable and consistent. Initial separate analyses of FY 2001 and FY 2002 produced five and four clusters respectively. Re-analysis of only four clusters for each year produced consistent results. Across both years two clusters were clearly replicated and resembled results from a previous cluster analysis in 1994 of children served by TDMHMR. A juvenile justice population was clearly identified and a severe and persistent mental illness (SPMI) population was clearly identified. The other two large clusters varied primarily in level of severity of symptoms and functioning. These two clusters appear to potentially distinguish between children with emotional disturbance (ED) and children with serious emotional disturbance (SED). The tables on the following pages are display the means for each cluster for small subsets of similar variables. The raw values, rather than the standardized values included in the cluster analysis, are displayed in the tables. Boldface type is used to indicate variables that seem to particularly distinguish one cluster from the others.

Summary Profiles of Each Cluster

Severe Persistent Mental Illness Cluster

- *Equals 2.5% of population served.*
- *High level of current MH or SA treatment, Extensive history of MH or SA treatment, several previous state hospitalizations or residential treatment placements.*
- *On average 2 diagnoses. Higher levels of Bipolar, Major Depression, Schizophrenia and other psychosis.*
- *High Average CBCL total scores (T scores of 70+).*
- *High Proportion enrolled in Special Education (40%+) and somewhat older (average age = 15.1).*
- *History of Dangerousness to Self or Others and higher Current Danger to Self or Others scores than other MH clients.*

Juvenile Justice Cluster

- *Equals 16.7% of population served.*
- *High level of current juvenile justice involvement and extensive history of juvenile justice involvement. The majority (70%+) have Axis IV indicators of trouble related to the interaction with the legal system and crime. Over half are referrals from TYC or JPC.*
- *Higher proportions diagnosed with Conduct Disorder (58%) and significant numbers diagnosed with Substance Abuse (38%).*
- *Highest levels of current substance abuse and history of substance abuse.*
- *High levels of current school problems and a history of school problems.*
- *Highest total number of Axis IV psychosocial problems (3.14 on average).*
- *Primarily male (72%) and older (average age = 15.3).*

Serious Emotional Disturbance Cluster

- *Equals 37% of population served.*
- *Highest Average CBCL total scores (average T scores of 74).*
- *However, only the Community Functioning and Problems Behavior Rating Scales for the areas of school and family indicate substantial problems.*
- *High level of referrals from family/self and school.*
- *Relatively young (average age = 11.3).*

Emotionally Disturbed Cluster

- *Equals 43% of population served.*
- *Very low levels of current MH or SA treatment, very little History of MH or SA treatment. Very low levels of involvement with Juvenile Justice. Very low levels of substance abuse. Very low levels of family problems. Very low levels of school problems. Very low levels of dangerousness to self or others.*
- *Relatively young (average age = 11.5).*
- *High level of referrals from family/self and school.*
- *Lowest level of Axis IV problems relating to social environment.*
- *Lowest level of special education enrollment.*
- *Lower clinical CBCL scores (average T score = 61).*

Table 1
Treatment History

Cluster	N Obs	Variable	Mean	Std Dev
SPMI	998	Current Mental Health or Substance Abuse Treatment	2.78	1.54
		Previous History of Mental Health or Substance Abuse Treatment	3.69	1.49
		Total Axis I diagnoses	2.06	0.93
		Number of State Hospitalizations	2.20	1.70
Juvenile Justice	6905	Current Mental Health or Substance Abuse Treatment	1.75	1.50
		Previous History of Mental Health or Substance Abuse Treatment	2.03	1.65
		Total Axis I diagnoses	1.89	0.92
		Number of State Hospitalizations	0.07	0.26
SED	15277	Current Mental Health or Substance Abuse Treatment	1.53	1.28
		Previous History of Mental Health or Substance Abuse Treatment	1.54	1.43
		Total Axis I diagnoses	1.73	0.88
		Number of State Hospitalizations	0.03	0.18
ED	17988	Current Mental Health or Substance Abuse Treatment	0.99	0.96
		Previous History of Mental Health or Substance Abuse Treatment	0.77	1.03
		Total Axis I diagnoses	1.32	0.84
		Number of State Hospitalizations	0.02	0.16

The SPMI cluster was characterized as having higher levels of MH and SA treatment (both current and past) than other clients. Particularly noteworthy was that this cluster had a history of previous state hospitalizations. This cluster also had more diagnoses than the other clusters.

Table 2
Juvenile Justice Involvement

Cluster	N Obs	Variable	Mean	Std Dev
SPMI	998	Current Juvenile Justice Involvement	0.94	1.52
		History of Juvenile Justice Involvement	1.33	1.64
		Axis IV Juvenile Justice problems	0.24	
		Referral from TYC or TJPC	0.07	
		Juvenile Justice Population Indicator	0.16	
Juvenile Justice	6905	<i>Current Juvenile Justice Involvement</i>	3.15	1.54
		History of Juvenile Justice Involvement	2.90	1.60
		Axis IV Juvenile Justice problems	0.72	
		Referral from TYC or TJPC	0.53	
		Juvenile Justice Population Indicator	0.48	
SED	15277	Current Juvenile Justice Involvement	0.24	0.69
		History of Juvenile Justice Involvement	0.22	0.65
		Axis IV Juvenile Justice problems	0.10	
		Referral from TYC or TJPC	0.04	
		Juvenile Justice Population Indicator	0.07	
ED	17988	Current Juvenile Justice Involvement	0.27	0.79
		History of Juvenile Justice Involvement	0.22	0.73
		Axis IV Juvenile Justice problems	0.12	
		Referral from TYC or TJPC	0.07	
		Juvenile Justice Population Indicator	0.08	

The juvenile justice cluster was distinguished by having higher scores on both current and past juvenile justice involvement than any of the other client clusters. Two closely related measures are that the Juvenile Justice Population indicator for half of the clients was positive and that the majority of these clients also had positive indicators on Axis IV of having problems related to interaction with the legal system and crime. Over half had been referred from either Texas Youth Commission (TYC) or the Juvenile Probation Commission (TJPC).

Table 3
Axis I Diagnoses.

Cluster	N Obs	Variable	Mean	Std Dev
SPMI	998	Total Axis I Diagnoses	2.06	0.93
		Attention Deficit Hyperactivity Disorder	0.25	
		Conduct Disorder	0.38	
		MR or other Developmental Disorder	0.08	
		Schizophrenia or other Psychosis	0.13	
		Bipolar	0.35	
		Major Depression	0.27	
		Other Mood Disorder	0.19	
		Substance Abuse	0.17	
		Anxiety	0.14	
Juvenile Justice	6905	Total Axis I Diagnoses	1.89	0.92
		Attention Deficit Hyperactivity Disorder	0.22	
		Conduct Disorder	0.58	
		MR or other Developmental Disorder	0.07	
		Schizophrenia or other Psychosis	0.03	
		Bipolar	0.09	
		Major Depression	0.17	
		Other Mood Disorder	0.25	
		Substance Abuse	0.38	
		Anxiety	0.06	
SED	15277	Total Axis I Diagnoses	1.73	0.88
		Attention Deficit Hyperactivity Disorder	0.54	
		Conduct Disorder	0.39	
		MR or other Developmental Disorder	0.09	
		Schizophrenia or other Psychosis	0.04	
		Bipolar	0.10	
		Major Depression	0.15	
		Other Mood Disorder	0.22	
		Substance Abuse	0.02	
		Anxiety	0.11	
ED	17988	Total Axis I Diagnoses	1.32	0.84
		Attention Deficit Hyperactivity Disorder	0.50	
		Conduct Disorder	0.25	
		MR or other Developmental Disorder	0.07	
		Schizophrenia or other Psychosis	0.02	
		Bipolar	0.05	
		Major Depression	0.11	
		Other Mood Disorder	0.16	
		Substance Abuse	0.02	
		Anxiety	0.09	

The SPMI cluster was distinguished by having an average of 2 diagnoses each, more than any other cluster. The most serious diagnoses were present in a higher proportion in the SPMI cluster than in the other clusters. This cluster had higher rates of diagnoses for major depression (27%), bipolar (35%), schizophrenia other psychoses (13%) than the other clusters.

The juvenile justice cluster had significantly higher proportions of clients diagnosed with conduct disorder (59%) and substance abuse (38%) than any other cluster.

Both the ED and SED clusters had over half of their members diagnosed with ADHD, these rates are double that of the other clusters. The ED and SED clusters were relatively similar with lower overall average number of total axis I diagnoses than the other two clusters, but SED did have more diagnoses than the ED cluster. The SED cluster had slightly higher rates of depression, bipolar, anxiety, and conduct disorder than the ED cluster did.

Table 4
CBCL and GAF Scores

Cluster	N Obs	Variable	N	Mean	Std Dev
SPMI	998	CBCL Total Score	690	72.19	10.44
		CBCL Internalizing	688	68.72	10.5
		CBCL Externalizing	688	70.00	11.32
		Axis V GAF	978	42.93	7.38
Juvenile Justice	6905	CBCL Total Score	4477	65.72	12.11
		CBCL Internalizing	4474	62.07	12.3
		CBCL Externalizing	4474	66.63	12.23
		Axis V GAF	6866	43.51	6.75
SED	15277	CBCL Total Score	11059	74.05	7.81
		CBCL Internalizing	11052	69.48	10.2
		CBCL Externalizing	11055	73.01	8.74
		Axis V GAF	15172	43.78	6.41
ED	17988	CBCL Total Score	11415	61.45	10.59
		CBCL Internalizing	11408	58.44	11.75
		CBCL Externalizing	11409	60.14	10.81
		Axis V GAF	17800	47.67	6.64

The SPMI cluster had CBCL scores around 70, quite severe, but the SED cluster actually had the highest mean CBCL scores at 74. Both of these clusters have clinical severity levels that are extremely high. The juvenile justice cluster had lower CBCL scores (mean = 65) and the ED cluster had the lowest CBCL scores (mean = 61). The ED cluster also had higher Axis V GAF scores reflecting better functioning than the other three clusters.

Table 5

Community Functioning & Problem Behavior Rating Scales (CFPBRs)

Cluster	N Obs	Community Functioning and Problem Behavior Rating Scales (CFPBRs)	Current Functioning Means	Lifetime History Means
SPMI	998	Mental Health or Substance Abuse Treatment	2.78	3.69
		Danger to Others	1.76	2.53
		School Problems	2.45	3.26
		Alcohol or Drug Use	0.76	1.46
		Juvenile Justice Involvement	0.94	1.33
		Family Problems	2.56	3.44
		Danger to Self	1.94	3.15
		CFPBRs SUM	13.2	18.9
		Juvenile Justice	6905	Mental Health or Substance Abuse Treatment
Danger to Others	1.66			2.00
School Problems	3.02			3.47
Alcohol or Drug Use	1.87			2.55
Juvenile Justice Involvement	3.15			2.90
Family Problems	2.82			3.21
Danger to Self	1.24			1.57
CFPBRs SUM	15.5			17.7
SED	15277			Mental Health or Substance Abuse Treatment
		Danger to Others	1.62	1.70
		School Problems	2.68	2.77
		Alcohol or Drug Use	0.13	0.20
		Juvenile Justice Involvement	0.24	0.22
		Family Problems	2.61	3.10
		Danger to Self	0.99	1.15
		CFPBRs SUM	9.8	10.7
		ED	17988	Mental Health or Substance Abuse Treatment
Danger to Others	0.41			0.42
School Problems	1.45			1.53
Alcohol or Drug Use	0.10			0.18
Juvenile Justice Involvement	0.27			0.22
Family Problems	1.33			1.72
Danger to Self	0.27			0.33
CFPBRs SUM	4.8			5.2

The ED cluster had the lowest scores on the individual Community Functioning and Problem Behavior Rating Scales for both current functioning and lifetime history. The SPMI cluster and the juvenile justice cluster had the highest scores.

Table 6
Family and Social variables

Cluster	N Obs	Variable	Mean	Std Dev
SPMI	998	Current Family Problems	2.56	1.30
		Family Problems History	3.44	1.29
		Caregiver Capacity	2.06	1.36
		Axis IV –Primary Support Group Problems	0.87	
		Axis IV – Social Environment Problems	0.57	
		Family/Self Referral	0.27	
		CPS Referral	0.02	
Juvenile Justice	6905	Current Family Problems	2.82	1.17
		Family Problems History	3.21	1.19
		Caregiver Capacity	2.28	1.20
		Axis IV –Primary Support Group Problems	0.83	
		Axis IV – Social Environment Problems	0.55	
		Family/Self Referral	0.16	
		CPS Referral	0.01	
SED	15277	Current Family Problems	2.61	1.09
		Family Problems History	3.10	1.21
		Caregiver Capacity	2.06	1.19
		Axis IV –Primary Support Group Problems	0.87	
		Axis IV – Social Environment Problems	0.50	
		<i>Family/Self Referral</i>	0.38	
		CPS Referral	0.02	
ED	17988	<i>Current Family Problems</i>	1.33	1.06
		Family Problems History	1.72	1.38
		Caregiver Capacity	1.08	1.03
		Axis IV –Primary Support Group Problems	0.73	
		<i>Axis IV – Social Environment Problems</i>	0.36	
		Family/Self Referral	0.33	
		CPS Referral	0.02	

For family related problems, the distinguishing feature was that the ED cluster had lower current and past family problem levels, their caregivers had fewer problems, and their Axis IV problems related to the social environment were lower than the other three clusters. Both the ED and SED clusters had the highest levels of referral from the source “family/self”.

Table 7**School related variables**

Cluster	N Obs	Variable	Mean	Std Dev
SPMI	998	Axis IV – Educational Problems	0.68	
		School Problems History	3.26	1.43
		Current School Problems	2.45	1.58
		Enrolled in Special Education for ED	0.41	
		School Referral	0.05	
Juvenile Justice	6905	Axis IV – Educational Problems	0.73	
		School Problems History	3.47	1.20
		Current School Problems	3.02	1.43
		Enrolled in Special Education for ED	0.26	
		School Referral	0.05	
SED	15277	Axis IV – Educational Problems	0.76	
		School Problems History	2.77	1.27
		Current School Problems	2.68	1.23
		Enrolled in Special Education for ED	0.29	
		School Referral	0.16	
ED	17988	Axis IV – Educational Problems	0.67	
		School Problems History	1.53	1.28
		Current School Problems	1.45	1.17
		Enrolled in Special Education for ED	0.18	
		School Referral	0.15	

The Axis IV indicator for school problems was high for all four clusters. The SPMI cluster had the highest level of enrollment in special education for emotional disability and the ED cluster had the lowest rate. As indicated by the Community Functioning and Problem Behavior Rating Scales for school the juvenile justice cluster had the highest level of school problems and the ED cluster had the least problems. The SPMI cluster also had a high level of current school problems, but less of a history of school problems. Both the ED and SED cluster had higher levels of referral from school than the SPMI cluster or juvenile justice cluster.

Table 8**Drug and Alcohol Use and Diagnoses**

Cluster	N Obs	Variable	Mean	Std Dev
SPMI	998	Axis I Substance Abuse Diagnosis	0.17	
		Current Alcohol or Drug Use	0.76	1.28
		Alcohol or Drug Use History	1.46	1.65
Juvenile Justice	6905	<i>Axis I Substance Abuse Diagnosis</i>	0.38	
		Current Alcohol or Drug Use	1.87	1.61
		Alcohol or Drug Use History	2.55	1.52
SED	15277	Axis I Substance Abuse Diagnosis	0.02	
		Current Alcohol or Drug Use	0.13	0.46
		Alcohol or Drug Use History	0.20	0.61
ED	17988	Axis I Substance Abuse Diagnosis	0.02	
		Current Alcohol or Drug Use	0.10	0.42
		Alcohol or Drug Use History	0.18	0.59

The juvenile justice cluster had the highest level of drug and alcohol use and the highest proportion of substance abuse diagnoses. The SPMI cluster had moderate levels of drug and alcohol use and lower levels of diagnoses. The ED and SED cluster had almost no drug and alcohol use or diagnoses for SA.

Table 9
Danger to Self and Others

Cluster	N Obs	Variable	Mean	Std Dev
SPMI	998	Current Danger to Others	1.76	1.52
		Current Danger to Self	1.94	1.59
		Danger to Others History	2.53	1.66
		Danger to Self History	3.15	1.57
		CBCL Externalizing Composite Score	70.00	11.32
Juvenile Justice	6905	Current Danger to Others	1.66	1.37
		Current Danger to Self	1.24	1.41
		Danger to Others History	2.00	1.47
		Danger to Self History	1.57	1.57
		CBCL Externalizing Composite Score	66.63	12.23
SED	15277	Current Danger to Others	1.62	1.25
		Current Danger to Self	0.99	1.23
		Danger to Others History	1.70	1.34
		Danger to Self History	1.15	1.36
		CBCL Externalizing Composite Score	73.01	8.74
ED	17988	Current Danger to Others	0.41	0.72
		Current Danger to Self	0.27	0.66
		Danger to Others History	0.42	0.78
		Danger to Self History	0.33	0.78
		CBCL Externalizing Composite Score	60.14	10.81

While the SED cluster had the highest Externalizing CBCL composite score, the SPMI cluster was rated as having the highest level of danger to themselves and others both currently and previously. The ED cluster had the lowest levels of danger to themselves or others and the lowest CBCL Externalizing score.

Table 10
DSM Axis IV Stress

Cluster	N Obs	Variable	Mean	Std Dev
SPMI	998	Total Axis IV Psychosocial Problems	2.93	1.42
		Axis IV- Primary Support Group Problems	0.87	
		Axis IV- Social Environment Problems	0.57	
		Axis IV- Educational Problems	0.68	
		Axis IV- Interaction with Legal System Problems	0.24	
		Axis IV- Other Problems	0.26	
Juvenile Justice	6905	<i>Total Axis IV Psychosocial Problems</i>	3.19	1.31
		Axis IV- Primary Support Group Problems	0.83	
		Axis IV- Social Environment Problems	0.55	
		Axis IV- Educational Problems	0.73	
		Axis IV- Interaction with Legal System Problems	0.72	
		Axis IV- Other Problems	0.15	
SED	15277	Total Axis IV Psychosocial Problems	2.66	1.15
		Axis IV - Primary Support Group Problems	0.87	
		Axis IV - Social Environment Problems	0.50	
		Axis IV - Educational Problems	0.76	
		Axis IV - Interaction with Legal System Problems	0.10	
		Axis IV - Other Problems	0.20	
ED	17988	Total Axis IV Psychosocial Problems	2.17	1.07
		Axis IV - Primary Support Group Problems	0.73	
		Axis IV - Social Environment Problems	0.36	
		Axis IV - Educational Problems	0.67	
		Axis IV - Interaction with Legal System Problems	0.12	
		Axis IV - Other Problems	0.15	

The Juvenile Justice cluster had the highest total number of Axis IV problems. The ED cluster had the lowest level of problems relating to the social environment. The proportion indicating problems related to Access to Health Care, Occupation, Housing, and Economics were all generally under 10% so these Axis IV indicators are not displayed in the table above but they are included in the Total Axis IV psychosocial problems score.

Table 11
Demographics

Cluster	N Obs	Variable	Mean	Std Dev
SPMI	998	Gender	0.56	
		White	0.57	
		Black	0.11	
		Hispanic	0.30	
		Age	15.19	2.26
Juvenile Justice	6905	Gender	0.72	
		White	0.36	
		Black	0.20	
		Hispanic	0.42	
		Age	15.32	1.54
SED	15277	Gender	0.65	
		White	0.44	
		Black	0.22	
		Hispanic	0.33	
		Age	11.38	3.59
ED	17988	Gender	0.65	
		White	0.41	
		Black	0.19	
		Hispanic	0.39	
		Age	11.56	3.71

The ED and SED clusters were significantly younger (around 11-12) than the SPMI and Juvenile Justice clusters (around 14-15). The juvenile justice cluster had the highest proportion of males. The SPMI cluster had a higher proportion of whites than the other clusters while the juvenile justice cluster had a lower proportion than the other clusters.