

Early Childhood Specialist Program Report

Fiscal Year 2006-07



Division of Behavioral Health
Office of Behavioral Health and Housing
Colorado Department of Human Services

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Acknowledgements:

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Executive Summary

This report details the work and results of the Early Childhood Specialist Program in Fiscal Year 06-07, the first full year of operation. Each of Colorado's 17 publicly funded mental health centers received funding to hire a full time early childhood mental health specialist.

The specialists screened 3,503 children and provided in-depth assessments to 289 children. At least 164 non-Medicaid children received a variety of services including caregiver interventions, case management, and child interventions through this program. The specialists also provided 80 trainings in their communities on a variety of early childhood mental health topics.

The Early Childhood Specialist Program measured child and family outcomes in three areas; Change in Child Functioning, Change in Child/Family Functioning and Change in Family Functioning. Two tools were used to collect this data, the Colorado Client Assessment Record (CCAR) and the Parenting Stress Index (PSI). The CCAR is a clinician completed form and the PSI is a parent completed instrument.

Results from the CCAR demonstrate that on all eight dimensions a significant difference was observed in the appropriate direction utilizing a 99.9% confidence interval. In other words, children served through the ECS program showed significant improvement in the domains of Socialization, Family, Social Support, Hope, Empowerment, Role Performance, Overall Symptom Severity, and Overall Level of Functioning over a three month time period.

The Parenting Stress Index also showed statistically significant results. Improvements were documented in the parent-child relationship, relationship stress, the stress of the parental experience of the child's behavior as well as overall parental stress. An especially important finding was that parents reporting in the high-risk range for relationship stress were lowered from 18% at pre-test to 2% at post-test after an average of 5 months of treatment.

Background of Early Childhood Mental Health

Early childhood mental health definition

ZERO TO THREE, a non-partisan research-based nonprofit organization describes early childhood mental health as “the capacity of the child from birth to five to experience, regulate and express emotions, form close and secure interpersonal relationships and explore the environment and learn.” A Colorado mother defined it as “happy, healthy children who have good relationships with others.”

The importance of early childhood mental health

While we certainly all desire the best developmental trajectory for Colorado’s children many factors can impede this healthy development. Recent brain research has emphasized the importance of the early years for future success in life. The Center on the Developing Child at Harvard University in its publication “**A Science-Based Framework for Early Childhood Policy**” states that early experiences determine whether a child’s developing brain architecture provides a strong or weak foundation for all future learning, behavior and health. Four decades of program evaluation research demonstrate that there are a number of factors that can enhance positive development in the first five years of life. Stress in early childhood can be toxic to the developing brain architecture. But it is possible to improve a wide range of outcomes for vulnerable children. Creating the right conditions for healthy development in early childhood is believed to be more effective than treating long term problems later. (Harvard University, 2007)

Some children experience mental health problems even at a young age. We know that infants can experience depression at 4 months of age and that maternal depression, anxiety disorders, and other forms of chronic depression affect approximately 10% of mothers with young children (Zero to Three, 2004). Project BLOOM (A Colorado system of care program for children 0-5) data show that of the children eligible for BLOOM, who present with a significant social and emotional issue, 81% of their caregivers reported a family history of depression, 66% reported a family history of mental illness and 65% reported a family history of substance abuse. Twenty-seven percent of the children in Project BLOOM were presenting with signs of depression themselves.

Prevalence rates of mental illness or mental disturbances in young children may vary depending on the definition of mental difficulty that is used. Nationally, studies completed to date estimate the prevalence rate roughly between 10-20% if the broadest definition of mental difficulty is applied. One study of preschoolers determined that 21% of the sample met the criteria for a psychiatric disorder and 9.1% met the criteria for a severe disorder. (Lavigne, 1996) According to Jane Knitzer at the National Center for Children in Poverty, over 10% of young children entering kindergarten are rated by teachers as showing some degree of behavioral problems. In

samples of low-income young children, reported rates of behavioral problems are often two to three times higher (Johnson & Knitzer, 2005).

In Colorado, The Division of Behavioral Health in its 2008 Population In Need study estimated that 404,160 children ages 0-5 live in Colorado. Based on 2006 prevalence estimates, it is further estimated that approximately 8.76% of children ages 0-5 have an identifiable, serious emotional disturbance (SED). If we round the prevalence rate of SED to 9%, the number of children in Colorado with the most serious mental health issues is approximately 36,374.

Parent Perspective

Parent perspectives on their children's social and emotional health are also critical in understanding the extent of the issues. Through Colorado's Child Health Survey (2004; 2005) 21% of parents with children under age 6 reported concerns about difficulties with their child's emotions, concentration, behavior or getting along with others. However, of these parents, 79% had never accessed counseling or supports to address the difficulties with their child.

Childcare Expulsions

Children are often asked to leave childcare settings because of challenging behavior related to social and emotional difficulties. Nationally, rates of preschool expulsion are 6.7 per 1000; three times the rate of expulsion for school-age children (Gilliam, 2005). The same national study found that expulsion rates were significantly reduced when teachers had access to mental health consultation. Similar results were found in Colorado. In 2006, a statewide survey identified that 10 in every 1000 children were removed due to challenging behaviors. (Hoover, 2006) The K-12 school system has counselors and special education staff available, but the childcare setting often has inadequately trained staff without support to work with children with challenging behaviors and or mental health issues.

National Interest

Many national panels and organizations have called for attention to early childhood mental health. Certainly attention to school readiness has highlighted the fact that efforts to improve school success can't just begin at kindergarten and can't just focus on academics. In fact, the emotional, social and behavioral competence of young children is a strong predictor of academic performance in elementary school. (Raver, 2002) The President's New Freedom Commission Report, *Achieving the Promise: Transforming Mental Health Care in America* (2003) called for early mental health screening assessment and referral to services as well as promotion of the mental health of young children. Federal agencies typically focused on older children are becoming interested in early childhood.

Colorado Interest

Colorado was the second state in the nation to address the 0-5 population with a system of care cooperative agreement, **Project BLOOM**, through the *Comprehensive Community Mental Health Services for Children and Their Families Program* from the Substance Abuse and Mental Health Services Administration. At the time Colorado received this award, the Federal government was interested in adjusting the grant program to be more amiable to early childhood projects. A number of states have subsequently received system of care awards for the 0-5 population. Using grant guidelines that were designed with older youth in mind has been challenging but Colorado has successfully implemented a system of care for young children. This grant administered by the Colorado Department of Human Services, Division of Behavioral Health has community sites in Aurora, Grand Junction, Colorado Springs, and Canon City.

In January, 2006 Colorado's state legislature passed a Resolution (**Colorado Senate Joint Resolution 06-015 Concerning Young Children with Challenging Behaviors**) that recognized several significant points, and authorized a study on the issue of challenging behavior in children less than six years of age.

A subsequent study was conducted by the University of Colorado at Denver and Health Sciences Center (Hoover, S., *Children with Challenging Behavior: A Survey of Licensed Early Care and Education Providers in Colorado*. Presented to Colorado's Early Childhood and School Readiness Commission, June, 2006) with findings that support the premise that young children are being significantly impacted by unaddressed, or inappropriately addressed, social, emotional and behavioral concerns.

Early Childhood Colorado developed through private foundation funding and the Maternal and Child Health Bureau's *Early Childhood Comprehensive Systems Initiative* focuses on four domains: early care and education, health, family support and mental health. This initiative is staffed by the Lieutenant Governor's Office. Local councils engage communities in early childhood work across the state.

The Early Childhood Councils are a result of a recent legislative expansion (**HB06-1062**) of the *Consolidated Child Care Pilots* that existed from 1997 – 2006. Currently, 31 Early Childhood Councils are active in 56 of Colorado's 64 counties. Councils are required to have mental health representation. The Early Childhood Specialists located at the mental health centers are required to coordinate with the councils. In addition, Lieutenant Governor O' Brien has appointed an **Early Childhood Council Advisory Team** connected to this legislation. Two Early Childhood Specialists have been appointed to this council. The Division of Behavioral Health has an ad hoc position on the council.

Colorado is the recipient of technical assistance from the **Center on the Social and Emotional Foundations for Early Learning (CSEFEL)**. CSEFEL is focused on promoting the social emotional development and school readiness of young

children ages 0 to 5. CSEFEL is a national resource center, funded by the Office of Head Start and Child Care Bureau for disseminating research and evidence-based practices to early childhood programs across the country.

Harambe "a thoughtful and purposeful gathering about early childhood mental health" has been promoting mental health for over a decade. The grassroots effort supported several important gatherings of professionals from both the childcare and mental health fields titled "*For the Love of Children*" and produced several important documents.

Invest in Kids, a Colorado non-profit, partners with communities to improve the health and well being of Colorado's children (prenatal to age 5), particularly those from low-income families, through advancing programs that work. They have successfully promoted the Nurse Family Partnership and are now promoting **The Incredible Years**. After surveying the Colorado community, they learned that teachers felt one third of the children were arriving at school socially and emotionally unprepared to learn. Incredible Years is an evidenced-based school based program for children 3-8 that helps address social and emotional issues.

Colorado Blue Ribbon Policy Council on Early Childhood Mental Health
Three of the programs/initiatives listed in this report, Harambe, Project BLOOM and Kid Connects joined together in 2003 to form a Blue Ribbon Policy Council to address early childhood mental health policy. The Council has over 40 members representing higher education, state government, parents, advocacy organizations and legislators. The Council is currently engaged in developing a strategic plan for early childhood mental health in the State of Colorado.

While the above discussion does not represent all the Colorado efforts in early childhood mental health, it does demonstrate a growing recognition and interest by the legislature, executive branch and a variety of governmental and private funders of the importance of early childhood mental health.

The Importance of Early Childhood Mental Health Specialists

The early childhood specialists need extensive training in screening and assessment to fully implement their duties. Assessment with young children is more challenging due to their age appropriate limited verbal and mental capabilities. Behavior, sometimes subtle must be interpreted by skilled observation. The child must often be observed with caregivers and in several settings to discern the meaning of the behavior. Mental health issues in young children are often relationship difficulties and in fact all of early childhood mental health must be seen in the context of an adult relationship. This means that early childhood clinicians are sometimes assessing a relationship as well as an individual child. These are skills that require extensive training and supervision. Data has shown that early intervention can have lifelong impact, changing the trajectory of a child's life. Therefore, it is critical that we have the best-trained workforce serving children at this most vulnerable and critical age.

Background of the Early Childhood Specialist Program

From 1997 to 2002, the state of Colorado funded two mental health Early Intervention (EI) pilot programs with very young children in childcare settings as a means to prevent severe emotional and behavioral problems from escalating. The pilot sites were two Denver metro area mental health centers: the Pearl Project at the Mental Health Center of Denver and the Child Development Program at the Mental Health Center of Boulder County.

The pilots completed extensive evaluation. Through these efforts, the Early Intervention programs have resulted in tremendous improvements. Thirty four percent (34%) of pilot site children demonstrated improvements in behavior. Children receiving EI services integrated into the early childhood systems demonstrated greater improvements than children receiving services through the regular mental health system – at an average cost of 1.7 times less than traditional treatment. Program results demonstrated improvements in classroom quality, staff-child interaction scores, teacher satisfaction and reduction in emotional disturbances (Center for Human Investment Policy, February, 2002).

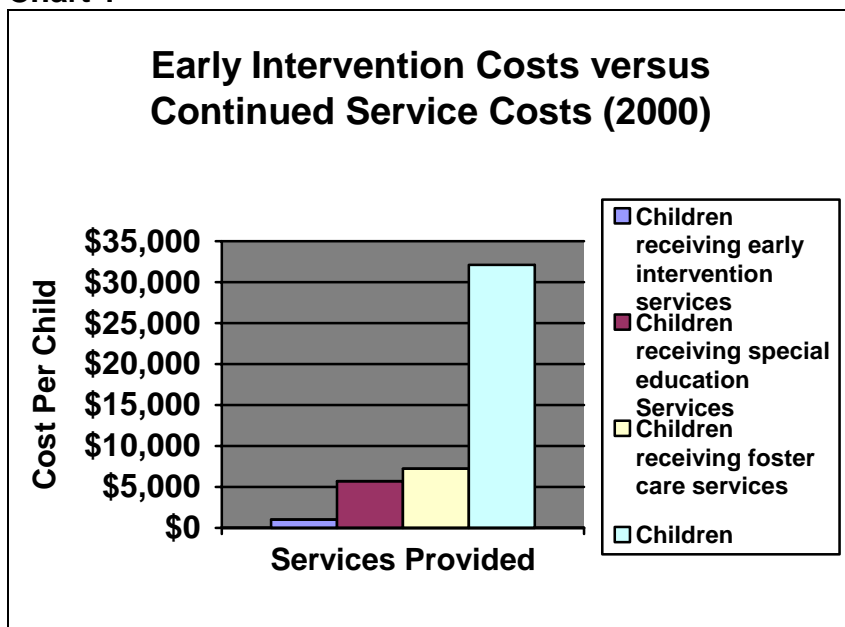
In addition, two other studies were completed in 2000 by the Center for Human Development Investment Policy that demonstrated the need and cost effectiveness for such programs.

One study found that one in six (15.4%) Colorado children in childcare from birth to eight years of age have emotional/behavioral problems. In the month prior to the survey, childcare providers dealt with emotional or behavioral problems 16,727 times involving 4,157 children or about four incidents per child. Additionally, 77% of survey respondents felt it would be helpful to have regular consultations with mental health professionals to help them deal with children.

Another study found that if half of the children served by the Early Intervention program could be diverted from continuing problems and public system involvement, the cost of the early intervention program could be offset. For example, the Early Intervention program costs were determined to be \$987 per year per child as compared \$5,693 for one year of special education, \$7,200 for six months of foster care, or \$32,130 for 63 days in a psychiatric hospital (Gould, 2000).

Chart 1 shows the cost of early intervention serves as compared to services that would potentially be received if children were not diverted from negative outcomes.

Chart 1



The initial pilots funded by this effort obtained additional federal and private foundation funding from Rose Community Foundation, Caring for Colorado, and the Colorado Health Foundation. These pilots are ongoing and have expanded their model, **Kid Connects**, to include health consultation and services to family day care homes.

Based on these studies and the positive evaluation results from the pilot program, in 2002 the Colorado Department of Human Services advanced a budget request for \$1.1 million to place an early childhood specialist in each of the 17 mental health centers as well as supportive psychiatric services. This budget request was approved by the legislature and then rescinded during the budget cuts that same year.

When Referendum C dollars became available for reinstating cuts to mental health programs, this early childhood specialist budget request was approved. \$279,990 was made available for a partial year in FY 06. However, for fiscal year 07, \$1.1 million was allocated to the Colorado Department of Human Services for the Early Childhood Specialist Program.

Colorado Early Childhood Specialist Program

Goals of the Early Childhood Specialist Program:

- to provide early childhood mental health services to non-Medicaid children
- to increase capacity at each of the 17 public mental health centers to provide early childhood mental health services within the array of mental health center services and in the communities that they serve

Target population

While the community and all children in the catchment area of the community mental health center benefit from the increased expertise and focus of the early childhood specialist, children birth through age 5, who are not Medicaid eligible, are the focus of individual services. Resources are already available to serve Medicaid children, and it is believed that the increased training and expertise can be shared across all clinicians serving young children.

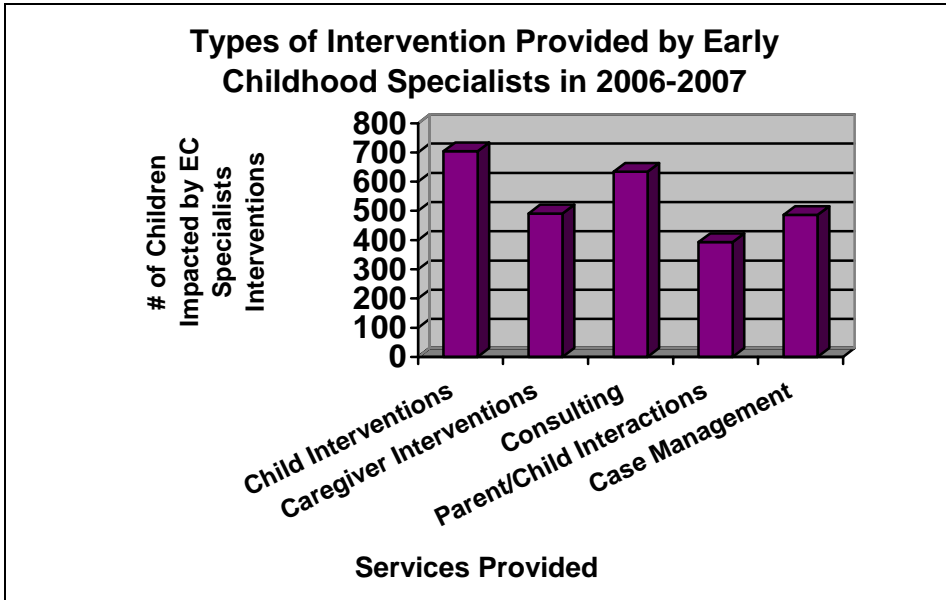
Job requirements

Community mental health centers were required to hire Masters-level clinicians with a background in early childhood, if at all possible. In some areas where such professionals are not available, centers recruit the best candidates and provide extensive clinical training in early childhood mental health. All Early Childhood Specialists are required to become proficient in using the DC: 0-3R assessment system. The DC: 0-3R was first published in 1994 to address the need for a systematic, developmental-based approach to the classification of mental health and developmental difficulties in the first 4 years of life. The creation of the DC: 0-3 represented a useful scheme that complemented rather than replaced existing medical and developmental assessment frameworks such as the The Diagnostic and Statistical Manual of Mental Disorders of the American Psychiatric Association and the International Classification of Diseases of the World Health Organization.

The early childhood specialist position is a combination of direct services, consultative services to families and early care and education providers, and cross-systems program development. Chart 2 shows the types of services provided by Early Childhood Specialists.

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Chart 2



Trained in the unique developmental issues of young children, Early Childhood Specialists are housed in the community mental health centers and work closely with other community agencies to develop and sustain appropriate mental health programming for young children. The Early Childhood Specialists provided screenings to 3,503 children and assessments to 289 children as indicated in chart 3. Chart 4 highlights the consultative services provided by Early Childhood Specialists during FY 2006-07. These numbers may be duplicated as many children received more than one intervention

Chart 3

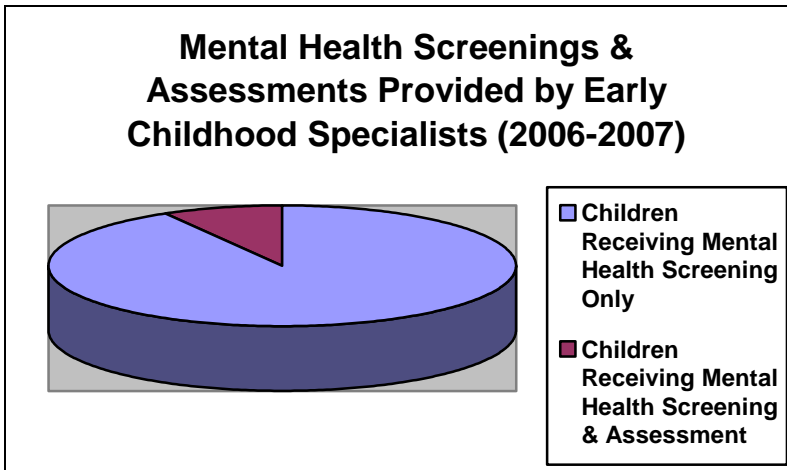
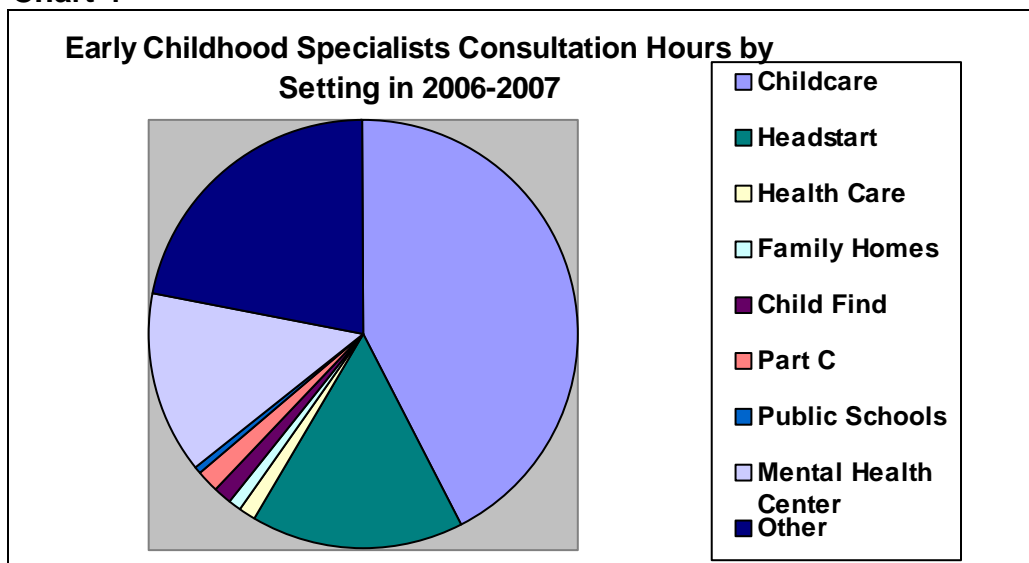


Chart 4



Training

Part of the role of the Early Childhood Specialists is to share knowledge with the community concerning early childhood mental health. The Early Childhood Specialists from the 17 community mental health centers provided over 80 trainings during Fiscal Year 06-07 to early childhood professionals, parents, and community members throughout the State of Colorado. Nine of fourteen centers (nearly 65%) provided training by their Early Childhood Specialists on positive parenting skills and issues such as how to engage parents and identify children with mental health needs. Over half (57%) of the Early Childhood Specialists trained parents and professionals on the importance of infant and early childhood mental health and how this manifests in young children, while half trained child care providers on the EC mental health consultation program. Forty-three percent gave trainings on issues of child welfare, including “Trauma, Attachment, and Behavior of Foster and Adoptive Children”. Over one quarter of the Early Childhood Specialists provided training on challenging behavior and 29% provided diagnoses-specific training including sensory-integration disorder, autism and Asperger’s Syndrome, and ADD/ADHD. Chart 5 below shows the training received and provided by the Early Childhood Specialists.

As the specialists offer expertise to the community it is important for them to continually stay current with best practices in the field and to further develop their own expertise. To that end the state offers bi-annual training and networking sessions. Comprehensive training includes sessions at the annual Colorado Behavioral Health Care (CBHC) Conference held yearly in the fall. CBHC has begun adding special sessions focused on early childhood mental health. Other meetings have included a special session with Part C coordinators in August of 2007 to increase collaboration between the two systems. Another training was the

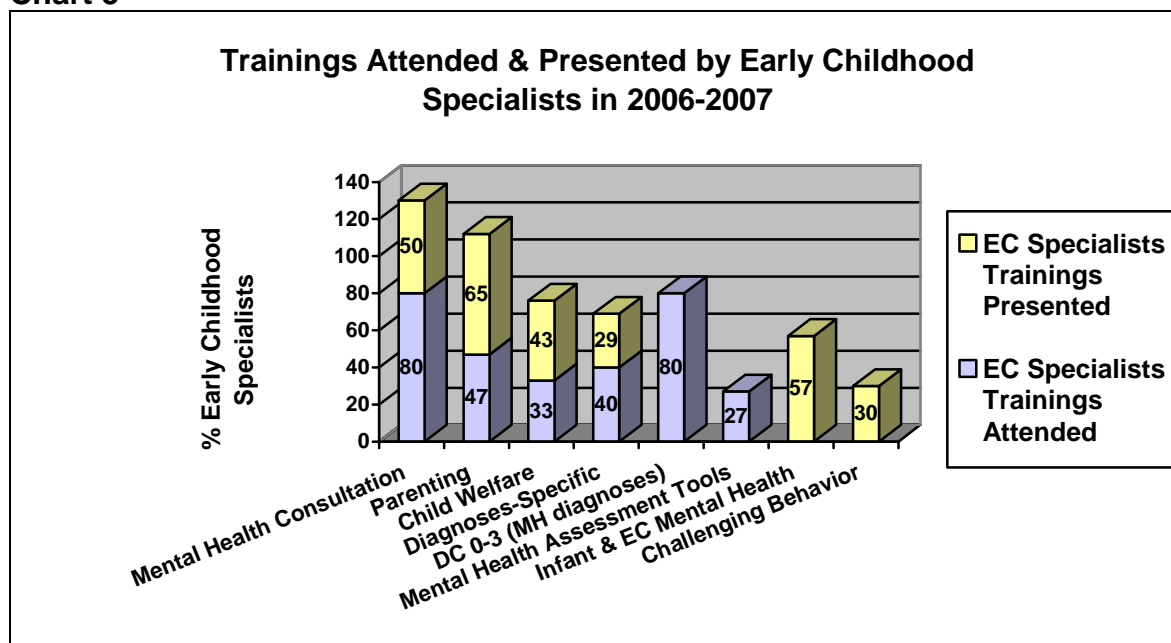
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February 8-9, 2007 *Infant and Early Childhood Mental Health in Colorado-Connecting Policy with Research and Practice Conference* sponsored by Colorado Association of Infant Mental Health and Project BLOOM. Other optional trainings and phone calls are sponsored throughout the year.

In addition to state sponsored training the specialists have pursued other trainings to enhance their skills. During FY 2006-07, the Early Childhood Specialists representing all 17 community mental health centers participated in over 130 training sessions. Twelve of fifteen counties (80%) attended trainings on mental health consultation, in order to be more effective when consulting with child-care programs on issues of social/emotional/behavioral health in young children. Eighty percent also attended DC 0-3 training, gaining further knowledge on early childhood mental health and diagnoses. Nearly half (47%) were present at trainings focused on parenting. Trainings in this area ranged from “The Importance of Fatherhood” to “The Non-Compliant Child Parenting Curriculum”.

One third of the Early Childhood Specialists gained further knowledge on child welfare by attending trainings such as “Effective Welfare Practices with Latino Families” and “Evidence-Based Mental Health Treatment for Abused Kids”. Forty percent of Early Childhood Specialists attended trainings on specific diagnoses, including autism, ADHD, pediatric bipolar disorder, Reactive Attachment Disorder, and Shaken Baby Syndrome. Over one quarter (27%) of those community mental health centers that replied had Early Childhood Specialists who attended trainings on specific assessments. Other trainings attended included areas such as early childhood mental health art, play-based therapy, and understanding issues of poverty.

Chart 5



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Outcomes and Results

In order to assess the relative value and effectiveness of the Early Childhood Specialist Program, the following performance outcome measures were identified and used to measure the results of the Early Childhood Specialist Program.

Outcome	Indicator	Tool	Measure
Change in Child Functioning	Child's MH Symptoms	CCAR	Overall Symptom Severity at admit and discharge
	Level of Functioning	CCAR	Overall Level of Functioning at admit and discharge
	Social skills	CCAR	Interpersonal Domain and/or Socialization Domain Ratings
	Change in rate of childcare expulsions	PSI Form	Reported on PSI Form
	School readiness	CCAR	Outcome section for under 6yrs old
Change in Child/Family Functioning	Family Relationships	CCAR PSI	Family Domain Ratings at admit and discharge and PIR-GAS Parent/Child Interaction
Change in Family Functioning	Change in rates of out-of-home placements	CCAR	CCAR update completed for "Current living arrangement" when placement changes
	Family stress	Parenting Stress Index (PSI)-Short Form	Overall score
	Family Isolation/Social Supports	CCAR	Social Support Domain rating
	Family sense of competence	CCAR	Empowerment Domain
Increase in Early Childhood MH Professional Development	Trainings Attended and Delivered	Yearly Reports to DMH	
Infuse MH into Early Childhood System	# of Screenings/Assessments completed	Reports to DMH	

Reporting requirements

Early Childhood Specialists are required to submit monthly performance reports using a web-based, reporting system developed by the Division of Behavioral Health. Early Childhood Specialists submit for all children receiving services the Colorado Client Assessment Record (CCAR), the Parenting Stress Index (PSI),

and a year- end report listing all trainings attended and provided as well as success stories. Results from the various data sources are discussed in the following sections.

CCAR Results

The Colorado Client Assessment Record (CCAR) is the statewide client information system developed and maintained by the Division of Behavioral Health. The Colorado Client Assessment Record (CCAR) was developed over 25 years ago. It has been required on all Admissions and Discharges to the Colorado Public Mental Health System since 1978. It has undergone several major revisions with the start of Colorado's Managed Care program and its use has broadened across systems (i.e., Division of Youth Corrections, Child Welfare, Residential Treatment Centers, etc.).

CCAR has many uses. Initially it was used to count admissions for monitoring performance contracts between the State of Colorado and the mental health centers. Services data has been collected since 1995 and has been matched with CCARs at the client level for studies and reports. Single variable studies such as ethnicity, income, and diagnosis are commonly done. Trends can be examined for periods ranging from quarterly to several years. However, outcome is most often studied.

In summary, CCAR is well established, well researched, and lends itself well to applied research studies. Its utility in Colorado's public mental health system is known; it provides information on everything from simple counts published annually (Orchid Reports) to Allocation formulas for incentives awards. Linked with services, it can provide information on cost benefit and other more complex kinds of research questions. Furthermore, CCAR has been used in Arizona, Delaware, Florida, Wyoming, and Ontario.

Recently, this system was updated and several sections pertinent to young children were added. The CCAR was completed by the early childhood specialist at intake, every 6 months, and then re-administered at program discharge. The following is a summary of the performance data related the Early Childhood Specialist Program.

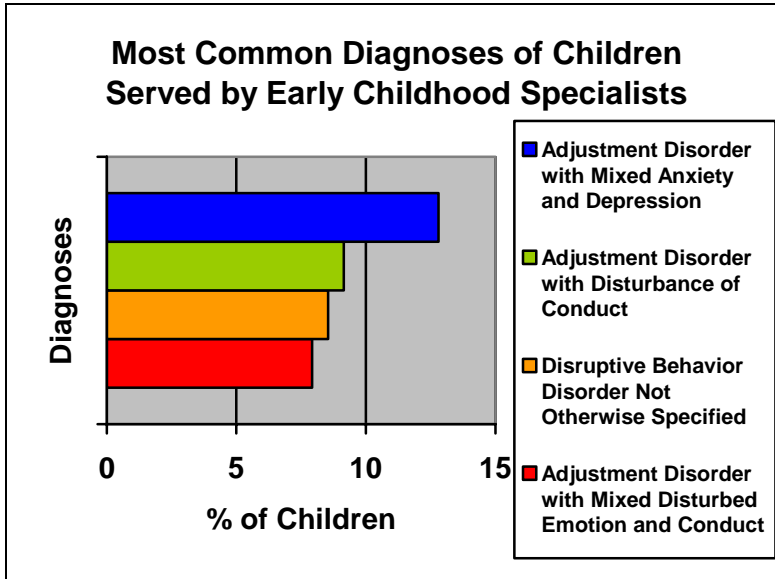
One hundred and sixty four children were served by the Early Childhood Specialist Program as recorded by the 2007 CCAR database. Approximately 65.2% of



those children were male (N=107), and 34.8% were female (N=57). (See Chart 5) The majority of children receiving services were Caucasian (N=127; 77.9%). Children ranged in age from 0 to 6.97 years old (range typically uses whole numbers only; e.g., 2 months to 7 years). Children exhibited approximately 40 different Axis I diagnoses (e.g., Adjustment Disorder with Mixed Anxiety

and Depression (N= 21), Adjustment Disorder with Disturbance of Conduct (N=15), Disruptive Behavior Disorder Not Otherwise Specified (N=14), and Adjustment Disorder with Mixed Disturbed Emotion and Conduct (N=13)). The most common diagnoses are shown in Chart 7.

Chart 7



In an attempt to determine the program effectiveness, a subset of the total population was examined using CCARs. First- and last-CCARs were compared on nine domains including Socialization, Family, Social Support, Hope, Empowerment, Role Performance, Overall Symptom Severity, Overall Level of Functioning, and School Readiness. As the first eight domains were scored using a Likert scale, a paired sample t-test was conducted using first and last CCAR data.

As the first eight domains were scored using a Likert scale, a paired sample t-test was conducted using first and last CCAR data. On all eight dimensions a significant difference was observed in the appropriate direction utilizing a 99.9% confidence interval. In other words, children served through the ECS program showed significant improvement in the domains of Socialization, Family, Social Support, Hope, Empowerment, Role Performance, Overall Symptom Severity, and Overall Level of Functioning over a time lapse of at least three months (see Table 1).

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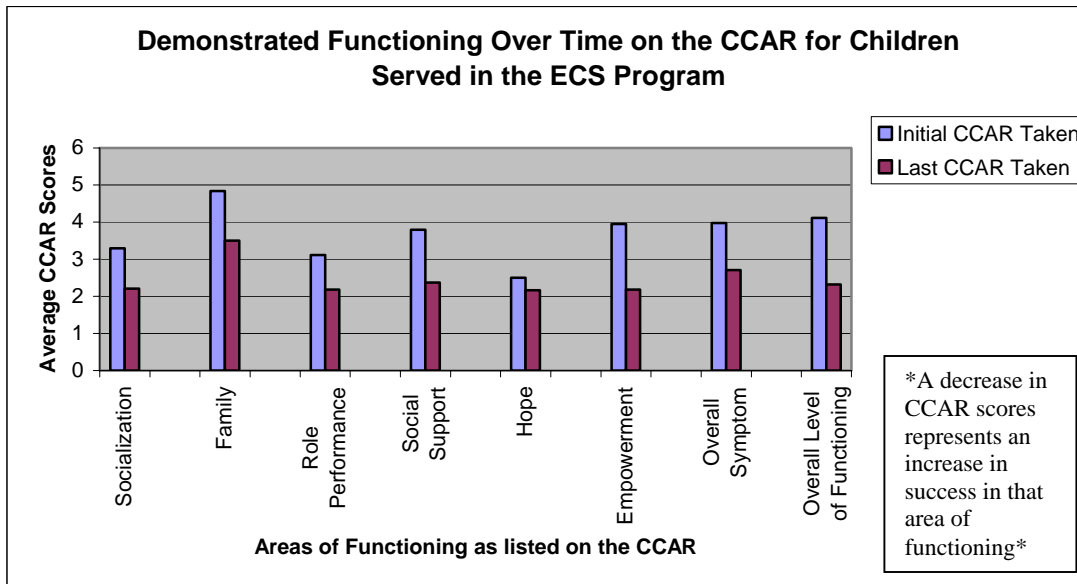
Table 1

Paired Sample Comparison of CCAR Domains

Domain		M	<i>t</i>	Significance
Socialization	First CCAR	3.29	4.50	.00
	Last CCAR	2.21		
Family	First CCAR	4.84	4.78	.00
	Last CCAR	3.50		
Role Performance	First CCAR	3.11	3.37	.00
	Last CCAR	2.18		
Social Support	First CCAR	3.79	4.51	.00
	Last CCAR	2.37		
Hope	First CCAR	2.50	2.83	.01
	Last CCAR	2.16		
Empowerment	First CCAR	3.95	4.26	.00
	Last CCAR	2.18		
Overall Symptom Severity	First CCAR	3.97	5.60	.00
	Last CCAR	2.71		
Overall Level of Functioning	First CCAR	4.11	6.16	.00
	Last CCAR	2.32		

The information contained in Table 1 is reflected in Chart 8. On all domains listed the concerns diminished. This means the scores on all these domains decreased showing improvement.

Chart 8



In addition, first and last CCARs were compared on the dimension of School Readiness. As School Readiness was a dichotomous variable, a Chi-square analysis was conducted. Significant differences were demonstrated between the first and last CCAR data, with 100% of the participants indicating School Readiness on the second CCAR, as compared to 58.3% indicating readiness on the first CCAR.

Parenting Stress Index Results

The Parenting Stress Index/Short Form (PSI/SF; Abidin, 1995) is a parent-report, 36-item questionnaire completed by parents or caregivers about their experience of stress in relation to parenting their child. The PSI/SF is designed for use with children ages 1 month to 12 years. It takes approximately 10 minutes to complete and has a 5th grade reading level. It has a built-in defensiveness scale to evaluate validity of responses. The PSI/SF has been validated across different groups and cultures and both the English and Spanish (Solis, 1991) versions were used in this evaluation. There are three subscales that measure parental stress, stress in the parent-child interaction and difficult child behaviors. In children under two, elevated scores on the difficult child behaviors subscale are often associated with dysregulated behavior in the child. The three subscales combine for a total Parenting Stress score. Higher scores indicate higher stress that potentially lowers the ability to appropriately parent the child.

Results of the Parenting Stress Index/Short Form

Parents were asked to complete the PSI/SF during the first couple sessions after a level of rapport was established between the therapist and parent. Parents also were asked to complete a follow-up PSI/SF at either 6 months or discharge. Of the 17 participating agencies, 12 (71%) submitted PSI/SF data on a total of 120 children. The majority (77%) of the PSI/SF's were completed by mothers, 14% by fathers, 3% by grandmothers, and the remaining 7% did not have the respondent indicated. Eight children had PSI/SF data from both parents, for a total of 128 initial PSI/SF reports.

Table 2

AGENCY	Frequency	Percent
Arapahoe/Douglas MHN	7	5.4
Aurora Mental Health ECFC	11	9.3
Jefferson Center for MH	11	8.5
Larimer Center for MH	27	20.9
MHC for Boulder/Broomfield	13	10.1
Midwestern CO MHC	9	7.0
North Range Behavior Health	13	10.1
Pikes Peak MHC	12	9.3
San Luis Valley MHC	6	4.7
Southwest CO MHC	8	6.2
Spanish Peaks MHC	7	5.4
West Central MHC	4	3.1
Total	128	100.0

The Parenting Stress Index /Short Form (PSI/SF) is a particularly revealing instrument because it captures to some degree the following three critical dimensions that contribute to the quality of the parent-child relationship and the parenting environment:

- Parental dimension – that is, the degree to which the parent feels competent, supported, and emotionally available to parent the child;
- Child dimension – that is, the degree to which this child is experienced as a difficult child to parent, perhaps because of regulatory problems; and
- Parent-child relationship dimension – that is, the parent's experience of being connected to or alienated/rejected by this child.

Almost half (49%) of the 128 parent/caregivers reported Total Parenting Stress in the clinical range at the point in which their children entered treatment.

- 41% of the parents reported a clinically elevated level of stress (> 85%ile) in the parent-child relationship, including feelings of being rejected by or alienated from the child. 20% of the parents reported very high scores (> 95%ile) suggesting that the parent-child bond is either threatened or has never been adequately established, thus identifying a sample of children who are at high risk of attachment problems.
- 56% of the parents reported a significant level of stress regarding the child's behavior (> 85%ile), indicating that the child's behavior is more difficult to manage than is typical. In very young children, 0-3, this suggests significant problems with regulation, while with children older than two; problems may be related to the parent's difficulty in managing the child's behavior as well as problems with the child's emotional regulation.
- 31% of the parents reported a significant level of stress in the parenting role (> 85%ile), particularly related to feelings of incompetence, limited ability to meet the demands of parenting, emotional distress, and or limited social support.

Follow-up data is available on 45 children who have completed a minimum of 6 months of treatment or who were discharged. Of these 45 children, 82% were discharged from treatment and 18% are in ongoing treatment. They were seen by the early childhood specialist for an average of 20.4 weeks (STD dev = 7.0), with a range of 4 to 36 weeks.

The following significant clinical improvements were identified:

- The quality of the **parent-child relationship** was significantly improved at the follow-up testing, going from 47% to 20% in the clinical range after an average of 5 months of treatment. The change in mean scores for relationship stress was statistically significant with an effect size of .32. (see table below)
- The proportion of parents no longer reporting in the very high-risk range for relationship stress was lower with 18% of the 45 parents reporting a very high level of stress in the parent-child relationship at pre-test, compared with 2% at post-test. ***This is a very important finding when looking at the mental health of young children.***
- There was a decrease in stress related to the **parental experience of the child's behavior**, with 62% of the parents reporting that their children's behaviors were in the clinical range at pre-treatment, compared with only 27% at the 6 month follow-up or discharge point. The change in mean scores for difficult child behavior was statistically significant with an effect size of .48.

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- **Parental stress** was significantly reduced (from 47% to 22% in the clinical range) indicating a significant improvement in parental feelings of competence, emotional functioning, and/or social support. The change in mean scores for parental stress was statistically significant.
- The overall mean score for **total parenting stress** was significantly lower at post-test, with an effect size of .52, indicating a decrease in parenting stress in general. The proportion of parents reporting clinically elevated levels of parenting stress decreased from 67% to 27%.

TABLE 3:

PARENTING STRESS INDEX SHORT FORM INTERVENTION EFFECTS

	<u>Pre-Treatment</u>	<u>Post-Treatment</u>	<u>F-value</u>	<u>df</u>	<u>P*</u>	<u>ES**</u>
	Mean (SD)	Mean (SD)				
Parental Distress Subscale	30.6 (8.3)	27.8 (7.6)	9.53	1, 44	.003	.18
Parent-Child Relationship Stress Subscale	24.9 (6.6)	20.7 (5.1)	21.06	1, 44	.000	.32
Difficult Child Behavior Subscale	35.5 (7.7)	30.1 (6.4)	40.5	1, 44	.000	.48
PSI/SF Total Stress	91.5 (17.5)	79.0 (14.3)	46.81	1, 44	.000	.52

Note. *two-tailed test; **ES = effect size using Eta²

Repeated-measures analyses of variance (RANOVA) were used to compare the pre- and post-treatment PSI/SF scores, using a two-tailed test and probability level of .05. Effect sizes were based on eta².

STORIES

The following stories illustrate the type of situations encountered by the Early Childhood Specialists and the resulting success of their interventions. These stories illustrate the intensity of interventions over a relatively short period. However, it should be noted that the interventions occur in multiple settings with multiple caregivers.

One 2-year-old child was referred from a home child-care provider for biting. He had been expelled from seven other child-care settings and was at risk for expulsion at his current setting. The Early Childhood Specialist administered a mental health screening which found the child to be far below the normal development for social/emotional skills. It was discovered that Jimmy had oral motor/sensory integration needs and speech/language needs. He was determined eligible for early childhood special education services and began attending school two mornings per week. Over the next year, the Early Childhood Specialist collaborated with the child's parents and the child-care provider to develop a plan to reduce the child's aggressive behavior and increase his success. The EC Specialist continued to consult with the home child care provider, providing direct intervention. In addition, the child's parents were referred to couples therapy to address the issues affecting the child, mainly drug/alcohol use and separation. Just recently the child's file was closed with the Early Childhood Specialist because of his success. His child-care provider felt she understood the child's needs and was able and dedicated to working with the child successfully without outside intervention. The child has not bitten in three months and is now verbally communicating his needs and wants.

Another Early Childhood Specialist is working with an adoptive family of a five-year-old child that has been diagnosed with Reactive Attachment Disorder as well as sensory integration issues. When the EC Specialist first began working with this family, they were ready to return him to the county, as the behaviors he exhibited were overwhelmingly challenging (smearing feces, many hour-long rages, physical aggression towards self and others, etc.). The child was also enrolled in a child-care program, which he was at risk of losing. Through the Early Childhood Program, the family was able to receive intensive treatment and in-home services that have improved their family dynamics tremendously. The child is no longer having extreme behaviors, rather age-appropriate tantrums. His self-aggression has stopped and the incidences of his aggression toward others have improved significantly. The child is no longer at risk of losing his child-care placement or his adoptive family. Thus, the Early Childhood Program has been instrumental in keeping young children with social/emotional needs in their child care programs and in their homes, specifically those children and families without Medicaid funding.

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System Impact

The Early Childhood Specialists have not only had an impact on young children with mental health needs and their families, but also on Colorado's mental health system. One Early Childhood Specialist has created a parenting group called 5 Incredible Years Parenting Program, which has been so successful with families in that community that the Department of Human Services has requested the program be offered in the Foster and Kinship Care System as well. In a different community, the Early Childhood Specialist recently began co-facilitating the Nurturing Parent Program for young children (ages 0-5) and their families. Many Early Childhood Specialists are also members of their community's Early Childhood Council (ECC). One Specialist is heading a sub group on Early Childhood Mental Health within her ECC and working to make recommendations for professional development of child care providers in their community. For instance, child care facilities and in-home providers would have to have a certain number of training hours with the Early Childhood Specialist or have trainings by the Specialist at their facility a certain number of times in order to receive any funding from the Early Childhood Council. The Early Childhood Specialists have worked hard to build collaborative relationships within their communities to address the mental health needs of their young children and families on a systems level.

Discussion and Summary

Significant progress was made on all five outcomes. However, the number of children for which both pre and post-tests were available was small due to start up issues and difficulties with the reporting systems. Each outcome will be listed and results highlighted.

Change in Child Functioning: Children served by the early childhood specialist showed significant improvement in the areas of Socialization, Role Performance, Overall Symptom Severity, and Overall Level of Functioning. Stories also confirmed improvements in child functioning allowing them to remain in their childcare settings.

Change in Child/Family Functioning: The Early Childhood Specialist Program positively influenced child and family relationships. The Parenting Stress Index showed that the quality of the **parent-child relationship** was significantly improved during the course of specialized early childhood services.

Change in Family Functioning: Parents experiencing very high parenting stress dramatically reduced as a result of their and their child's, involvement in the Early Childhood Specialist Program. The proportion of parents reporting clinically elevated levels of parenting stress decreased from 67% to 27%. In addition improvements in family functioning were demonstrated by the CCAR results with improvements in the family's sense of social support, hope and empowerment.

Increase in Early Childhood Professional Development: The Early Childhood Specialists knowledge and expertise was advanced through participation in 130 trainings provided in their community and by the state. Additionally, Early Childhood Specialists conducted over 80 trainings in their local communities reaching out to parents, community leaders, and other professionals.

Infuse Mental Health into Early Childhood System: Through monthly reports on activities, it is clear that the Early Childhood Specialists are providing services in a number of settings. Most specialists are involved with Part C and Child Find in their communities. Specialists are also providing training and consultation to a wide range of agencies including childcare, child welfare, and schools.

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