Developing a blueprint for training Iowa providers in early childhood mental health

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Introduction

This project grew out of discussions among members of the Iowa Early Childhood Mental Health Professional Development Work Group led by Rhonda Boltz (Iowa Department of Public Health) and Chris Rubino (Iowa State University and Iowa Department of Human Services). Members of the work group who were especially critical to shaping this project included: Gladys Alvarez (Des Moines Child Guidance Center), Leesa Dzuris (Lutheran Services of Iowa), Gretchen Hageman (Iowa Department of Public Health), Barb Khal (Child Health Specialty Clinics), Laura Larkin (Iowa Department of Human Services), Vickie Miene (Community Circle of Care), Betsy Moritz (Lakes Area Early Childhood Iowa), Sally Nadolsky, (Iowa Medicaid), Rebecca Sloan (Des Moines Child Guidance Center), and Donna Wong-Gibbons (Iowa Chapter – AAP).

The goal of this project was to develop a shared vision for professional development for Iowans who touch the lives of young children and their families. Specifically, to develop a plan for professional development that improves the ability of those providing services to young children and their families to promote healthy social and emotional development, prevent problems in social and emotional development, and address mental health problems in young children. In order to develop such a plan, it was decided to 1) summarize current research on infant and early childhood mental health interventions, 2) summarize recent efforts to train Iowa providers in evidence-based early childhood mental health interventions, 3) summarize current knowledge on best practices for training providers in evidence-based interventions and early childhood interventions, and 4) hold a retreat to get input from stakeholders regarding strengths and gaps in Iowa's system of professional development for early childhood mental health providers. Funding for this project was provided through an Iowa Department of Human Services contract to Iowa State University using ARRA funds.

Several experts in early childhood mental health contributed to this document. Each section lists the name of the individual(s) who were primarily responsible for writing that section. Part I summarizes current knowledge on early childhood mental health interventions, professional development in early childhood mental health, and recent efforts to train Iowa providers in early childhood mental health interventions

supported by research. Part II summarizes barriers to improving professional development in early childhood mental health and recommendations for professional development.

Part I: Research on Early Childhood Mental Health Interventions

Definition of early childhood mental health

Beth Troutman and Tracy Moran

Early childhood mental health focuses on the healthy social and emotional development of children ages birth to 5. During this developmental period there is significant growth in children's capacity to experience, regulate, and express emotions; form secure interpersonal relationships with caregivers; and explore their environment. Training in early childhood mental health approaches can be broadly grouped into three overlapping categories: promotion, prevention, and intervention. The goal of approaches that primarily focus on promotion of early childhood mental health is to increase the likelihood of healthy social and emotional development. The goal of approaches that primarily focus on prevention of early childhood mental health problems is to decrease the likelihood of clinically significant problems developing (e.g. difficulties in emotional regulation, disruptive behavior, and/or attachment) in populations who are at increased risk for mental health problems. The goal of approaches that primarily focus on interventions for early childhood mental health problems is to decrease identified problems that are clinically significant (i.e. child exhibits problems in social and emotional functioning that meet criteria for a mental health diagnosis and significantly interfere with functioning). Unfortunately, in the current early childhood mental health system, young children often require mental health interventions by the time their problems are identified.

Definition of evidence-based

Beth Troutman and Tracy Moran

In the past decade, there has been increasing emphasis on the importance of using therapeutic approaches that are described as "evidence-based practices", "research-based practices", "best practices", and/or "promising practices". In Iowa, this emphasis has been seen in initiatives that influence how early childhood professionals

provide mental health, home visiting, and educational services to young children and their parents. It is important to note that each initiative has used somewhat different definitions of "evidence-based practices", "research-based practices", "best practices, and "promising practices". For example, the definitions differ on the type of and amount of evidence needed to consider an intervention "evidence-based". What all of the initiatives promoting evidence-based practices share is an emphasis on use of approaches that are supported by research on early childhood mental health.

The evidence for the approaches discussed in this document ranges from approaches that are consistent with current research to approaches that have demonstrated efficacy in multiple randomized controlled outcome studies. The evidence base for each approach included in this document is summarized following a description of the target population.

Characteristics of the specific target population in studies of the intervention must be considered when evaluating the evidence. For example, the age of children in outcome studies is obviously an important factor when evaluating early childhood interventions. It is also important to consider the types of outcomes achieved and how the outcomes were assessed when evaluating approaches. For example, an approach might have strong evidence that it impacts cognitive development but weak evidence that it impacts social-emotional development. The focus of this review is approaches that impact early childhood mental health. Also, it is important to examine whether the approach has evidence for prevention, intervention, or both. For the purposes of this review, we have grouped early childhood approaches based on whether they primarily promote healthy social-emotional development, prevent problems in social-emotional development, or provide interventions for problems in social-emotional development.

Promotion

Beth Troutman

Activities focused on the promotion of early childhood mental health seek to enhance factors associated with positive social-emotional development. For example, since security of attachment is associated with infants and young children receiving sensitive and responsive care, promotion activities may focus on how to improve this caregiving factor. Policies focused on parental leave and child-staff ratios in child care settings are examples of broad-based initiatives targeting this caregiving factor. Universal postpartum home visiting is an example of an intervention that is designed to promote early childhood mental health by providing support for parents during the postpartum period. Due to the broad-based nature of promotion activities, it is often difficult to collect outcome data on their impact.

Child Care and Early Childhood Mental Health

Beth Troutman

Type, quantity, and quality of child care affect young children's social-emotional development. In a study of more than three thousand children, both individual and combined child care experiences of children in kindergarten were associated with disruptive behavior (Dmitrieva, Steinberg, & Belsky, 2007). Children placed in child care for longer hours and at earlier ages exhibited significantly more disruptive behavior. Kindergartners with limited or no child care experience exhibited more disruptive behavior when in a classroom with more peers who had extensive child care experience. There is some evidence that young children attending center-based care may be at greater risk for disruptive behavior than children in other types of nonparental care. Children who spend more time in child care centers in the first 4 ½ years are more likely to exhibit disruptive behavior (according to teacher ratings) at 4 ½, kindergarten, first grade, second grade, third grade, fourth grade, fifth grade, and sixth grade after statistically controlling for gender, ethnicity, presence of husband/partner, income, maternal depression, and parenting quality (Belsky, 2007). The negative impact of extensive center-based care on social-emotional functioning has been found even in high quality child care settings that positively affect cognitive and

academic outcomes (Haskins, 1985). However, number of hours in child care is more strongly related to disruptive behavior when children are in low-quality child care and when they spend a greater proportion of time with a large group of peers (McCartney et al., 2010)

Structural aspects of child care likely influence early childhood mental health due to their impact on interactions with child care providers and peers. In a study of more than one thousand families, the highest frequency of positive caregiving was seen when care was provided by a relative or an in home care provider, the next highest was seen in child care homes, and the lowest frequency of positive caregiving was seen in child care centers (NICHD Early Child Care Research Network, 1996). Children in home-based care are more likely to develop secure attachments to their child-care provider than children in center-based care (Ahnert, Pinquart, & Lamb, 2006). Smaller child-caregiver ratios are associated with higher quality child-caregiver interactions, less negative regard from the caregiver towards the child (e.g. expression of irritation, anger, or dislike of the child), and greater child compliance and cooperation with the caregiver (de Schipper, Riksen-Walraven, & Geurts, 2006). An observational study of 15-month-old children in child care centers found 50% of peer interactions were negative (e.g. hitting, pushing, grabbing an object, protesting) and children in lower quality child care exhibited more negative initiatives towards their peers than children in higher quality child care (Gevers Deynoot-Schaub & Riksen-Walraven, 2006a). The frequency of negative initiatives towards peers significantly increased from 15 to 23 months (Gevers Deynoot-Schaub & Riksen-Walraven, 2006b).

The Program for Infant/Toddler Care (PITC)

Beth Troutman

Description: PITC provides training to child care providers on practices associated with good quality care of children aged 0 to 3. The PITC approach emphasizes the importance of the child-caregiver relationship and child-directed learning for infants and toddlers. The goals of PITC training are helping child care providers become sensitive to the child's cues, connect with the child's family and

culture, provide responsive, relationship-based care, and design safe environments that are developmentally challenging.

Evidence base: The goals of PITC training are consistent with research on the characteristics of child care that contribute to positive social-emotional development. Research is currently being conducted to determine the impact of PITC training and technical assistance on the quality of infant/toddler care in child care settings (see http://www.wested.org/cs/we/view/pj/566).

Description of training: PITC provides a 40-hour training program that covers four modules: 1) Social-emotional Growth and Socialization, 2) Group Care, 3) Learning and Development, and 4) Culture, Family, and Providers (Iowa Program for Infant & Toddler Caregivers, 2004).

Implementation in Iowa: Hundreds of Iowa child care providers have attended PITC training in the past several years (Iowa Program for Infant & Toddler Caregivers, 2004; State Public Policy Group Inc., 2007) . Focus groups conducted with child care providers who had completed PITC training indicated they found the training useful but had difficulty implementing PITC recommendations in their child care setting (State Public Policy Group Inc., 2007). Home child care providers identified environmental changes as the most difficult to implement while providers who worked in child care centers indicated primary care and continuity of care were difficult to implement in a child care center. Barriers to implementing PITC recommendations included director buy-in and money.

Prevention of Early Childhood Mental Health Problems

Beth Troutman and Tracy Moran

We review two types of prevention approaches that are relevant to training Iowa providers in early childhood mental health: focused early childhood mental health prevention approaches and broad-based prevention approaches. Focused early childhood mental health prevention approaches specifically target social-emotional development and factors associated with social-emotional development. Broad-based

prevention approaches address the infant and parent-child relationship within a larger context of overall well-being. These approaches may target multiple outcomes such as positive physical health, wellness, and reduction of crime and poverty, coming from the perspective that a physically healthy and financially stable family is one in which an infant will thrive. Improving the functioning of the caregiver-child dyad and the child's social-emotional functioning may be a minor or major focus of these broad-based prevention approaches. Iowa has a number of home visiting programs that use a broad-based prevention approach. A recent review of these programs indicates relatively few of them have a primary focus on behavioral, social, and emotional health for children and parents (Iowa's Maternal Infant and Early Childhood Home Visiting Program).

Broad-Based Prevention Approaches

Healthy Families America (HFA)

Tracy Moran

Description of intervention: HFA is a home visiting program in which high risk families can begin receiving support starting during pregnancy and continuing through when their child is of preschool age. HFA's philosophy is strengths based, designed to assist families in managing difficulties by capitalizing on their capabilities.   Each HFA program is encouraged to decide what their area of focus will be based on their communities' needs. For example, an HFA program may focus on child abuse prevention, early intervention, parent education and/or health promotion, depending on site specific goals.

Weekly home visits are conducted with families, starting prenatally or early in infancy and continuing through the first three years of life. A standardized screening tool is utilized to assess for level of infant and familial risk for conditions that hinder child development, including coping skills, parenting skills, and family functioning (Iowa's Maternal Infant and Early Childhood Home Visiting Program). HFA offers multiple services to families designated as high-risk such as advocacy and connection to community resources, job training, parenting skills and healthy discipline education,

promotion of parent-child relationship, father involvement programs and social support.

Home visitors in HFA are called Family Support Workers (FSW). They are selected based on their personal characteristics and interest in working with diverse clients. There is no educational prerequisite to being hired as an FSW, but must complete HFA training.

Evidence Base: HFA has been shown to positively impact, child health, maternal health, child development and school readiness, positive parenting practices, referrals for services, and family economic self-sufficiency as well as reductions in child maltreatment, juvenile delinquency, crime and domestic violence (Anisfeld, Sandy, & Guterman, 2004; Caldera et al., 2007; A. Duggan et al., 2007; A. K. Duggan et al., 1999; Landsverk et al., 2002; Lee et al., 2009; Mitchell-Herzfeld, Izzo, Greene, Lee, & Lowenfels, 2005).

HFA meets the Department of Health and Human Services' (DHHS) criteria for an evidence-based home visiting program model (Paulsell, et al., 2010). According to the DHHS review of evidence-based home visiting programs, HFA had favorable impacts in seven domains (i.e. child development and school readiness, child health, family economic self-sufficiency, linkages and referrals, positive parenting practices, reductions in child maltreatment, and reductions in juvenile delinquency, family violence, and crime).

Implementation in Iowa: HFA conducts 44 programs in the state of Iowa (i.e., Healthy Opportunities for Parents to Experience Success or HOPES – Healthy Families Iowa). However, half of these programs have made modifications to the national HFA model (Iowa's Maternal Infant and Early Childhood Home Visiting Program).

Nurse Family Partnership (NFP)

Tracy Moran

Description: Nurse Family Partnership (NFP) is a prime example of a public health approach to infant mental health. NFP is an evidenced based public health home-visiting program developed by David Olds and evaluated in several randomized controlled trials across the United States (1977, 1988, 1994). Registered nurses trained in NFP according to NFP national service office guidelines conduct regularly scheduled visits with first-time mothers who voluntarily participate and are designated as low income from as early as possible in the mother's pregnancy (but no later than 28 weeks gestation) through the child's second birthday. The intervention occurs within a home context in a one on one format (i.e., nurse and mother/family).

During home visits, NFP nurses follow the program's theoretical framework which is grounded in attachment theory, parenting self-efficacy and human developmental ecology (Olds, Henderson, Tatelbaum, & Chamberlain, 1986). In addition, NFP home visitors are encouraged to use their professional knowledge and judgment within the NFP visit guidelines, thereby tailoring the visit according to the individual needs of each family. NFP nurses carry a case load of no more than 25 clients and are supervised by a supervisor who carries no more than 8 supervisees. NFP nurse supervisors provide nurses with reflective supervision as well as facilitating case conferences and team meetings (http://www.nursefamilypartnership.org/Communities/Model-elements).

The program's primary purposes are parent education and child health promotion. NFP has three main stated goals: 1) improving pregnancy outcomes via supporting pregnant women in preventive health care practices (e.g., routine prenatal care, good nutrition, and abstaining from cigarettes, alcohol and illegal substances); 2) enhancing children's health and development via supporting parents in providing care for their children; and 3) improving the overall family context via assisting parents in

planning for their educational and financial well-being, future pregnancies, and general stability.

Evidence base: NFP has documented numerous outcomes consistent with these goals in several randomized controlled trials conducted with diverse populations across the United States. Specifically, the following outcomes have been documented and replicated for mothers: 1) improved prenatal health, 2) reduced rates of subsequent pregnancies/births, 3) increased intervals between first and latter pregnancies/births, 4) increased rates of employment, 5) reduced use of welfare and for their index children: 6) reduced childhood injuries, 7) reduced mental health problems, and 8) enhanced school readiness and academic achievement (Kitzman et al., 1997; Kitzman et al., 2000; Olds et al., 1997; Olds, Henderson, Chamberlin, & Tatelbaum, 1986; Olds et al., 1998; Olds, Henderson, & Kitzman, 1994; Olds, Henderson, R., & Chamberlin, 1986; Olds, Henderson, Tatelbaum, & Chamberlin, 1988; Olds, Kitzman, et al., 2004; Olds et al., 2002; Olds, Robinson, et al., 2004). In addition to its primary public health related goals, NFP has documented significant reductions of child abuse and maltreatment at fifteen year follow-up (Olds, et al., 1997).

NFP meets the Department of Health and Human Services' (DHHS) criteria for an evidence-based home visiting model (Paulsell, et al., 2010). According to the DHHS review of evidence-based home visiting programs, NFP had favorable impacts in seven domains (i.e. child development and school readiness, child health, family economic self-sufficiency, maternal health, positive parenting practices, and reductions in child maltreatment).

Implementation in Iowa: There are four programs in Iowa that use elements of NFP but three of the four have made modifications to the program so only one program is implementing NFP with fidelity to the model (Iowa's Maternal Infant and Early Childhood Home Visiting Program).

Positive Behavioral Interventions and Supports (PBIS)

Gayle Luze

The field has not agreed on a single definition of Positive Behavioral Interventions and Supports (PBIS). In general, PBIS refers to a comprehensive system of teaching strategies and individual interventions to help children and adults develop appropriate behaviors. The focus is on using strategies that teach acceptable skills, rather than relying on techniques that stop or extinguish undesired behaviors. There is also a focus on supporting the individual who displays difficult behavior in the natural context or environment. The support comes from families, teachers, social service workers, and friends. PBIS intervention techniques focus on considering the contexts in which behaviors occur, developing interventions that address the function of the problem behaviors, and that replace inappropriate behaviors with appropriate communication (Haring & De Vault, 1996). The last point is based on the assumption that all behavior serves a communicative purpose; we need to understand that communicative purpose and find a more appropriate way for the individual to communicate with us. For example, a child may hit another child to get the teacher's attention; our intervention strategy would seek to teach the child a more appropriate way to communicate to the teacher that he wants some attention.

Recently increased focus has been placed on systematically using PBIS strategies with younger children. A focus on implementing PBIS strategies with integrity and consistently across all settings in schools has been known as School-Wide PBIS. These practices have been shown to be effective in reducing behavior problems e.g. (Luiselli, Putnam, Handler, & Feinberg, 2005; Scott & Barrett, 2004; Warren et al., 2006). Much less research has been conducted regarding the effectiveness of PBIS strategies implemented across an entire early childhood program or center (often called program-wide PBIS). Some recent research has shown benefits to children and programs. One example is from Hemmeter, Fox, Jack, and Broyles (2007) which described implementation in a Head Start program that noted change in focus from mental health resources being moved from intervention addressing existing problems to prevention efforts. Other studies have found that teachers can learn to implement elements of PBIS but there are often barriers to high quality implementation across classrooms and time (Branson & Demchak, 2011; Muscott, Pomerleau, & Szczesiul, 2009). Ongoing

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consultation to support implementation of PBIS features can help increase implementation of PBIS elements (Benedict, Horner, & Squires, 2007).

Center on the Social and Emotional Foundations for Early Learning (CSEFEL)

Gayle Luze

In response to a need for more effective dissemination of research information and training for Head Start and other early care and education professionals working with young children and their families, the **Center on the Social and Emotional Foundations for Early Learning (CSEFEL)** was funded by the Office of Head Start and the Child Care Bureau in the Administration of Children, Youth and Families in the U.S. Department of Health and Human Services (see: http://csefel.vanderbilt.edu/about.html). CSEFEL has the stated purpose of promoting the social emotional development and school readiness of young children birth to age 5. CSEFEL provides training materials and technical assistance regarding practices that are evidence-based. In order to provide technical assistance most effectively, they have partnered with 11 states around the country, with Iowa being one of the states.

CSEFEL organized interventions according to a tiered framework, using a pyramid as a visual representative of the tiers (Fox, Carta, Strain, Dunlap, & Hemmeter, 2009). The three tiers are: *(Tier 1) Universal Promotion* that includes two levels of practices necessary to the positive development of all young children. The first is providing nurturing and responsive relationships with adults (parents, caregivers, teachers). The second level is providing high quality supportive environments (in homes, classrooms, and early childhood programs); *(Tier 2) Secondary Prevention* that provides explicit instruction in social skills and emotional regulation to children who need support beyond the typical curriculum; and *(Tier 3) Tertiary Interventions* that are focused on the needs of a very small group of children who have ongoing challenging behaviors that need intensive individualized interventions. The pyramid model provides an excellent graphic representation of the services provided in that it shows the lower levels of the pyramid include provision of high quality practices necessary for all children and that are also foundations for teaching strategies or interventions provided

at the higher levels of the pyramid. The higher (and smaller) levels of the pyramid demonstrate that fewer children will need the supports at those levels, and that any intervention developed at that level rests on the foundation of high quality environments and positive relationships.
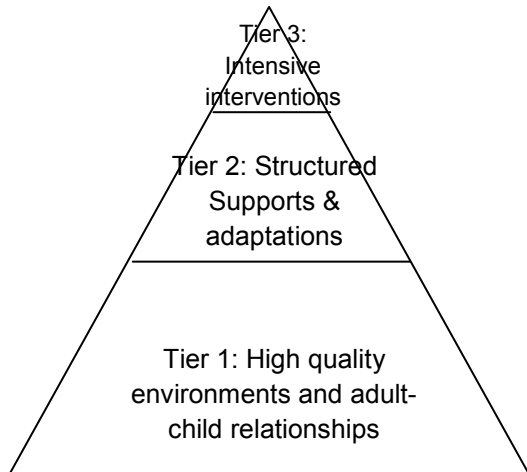
A key feature of CSEFEL's work is the provision of training modules on each tier of the pyramid model along with teaching strategies that are appropriate at each level. Training modules have been developed for providers of preschool age children, infants and toddlers, and parents. Training materials include PowerPoint slides, trainer scripts, activities, and video examples, and handouts. There are specific training materials to inform administrators of the model and how to support teachers in implementation. In addition, there is training information for professionals who will serve as coaches to support high fidelity of implementation for practitioners. The intention is to have coaches who already have relationships with teachers to facilitate the process. Training modules are organized to be presented in 4 day-long sessions. These sessions may be presented together, or may be divided by a space of time; with the first two modules usually presented together, then after a short period of time, the final 2 days. Day 1 is devoted to Tier 1, day 2 for Tier 2, days 3 and 4 for Tier 3. Modules for administrators/leaders are often added to day 4. Coaching is usually presented later

over 1-2 days for a smaller sub-group who can provide coaching in their other job roles. While the strategies that CSEFEL promotes have research support, the organization of the training modules and the format for training has not been researched. Training procedures include elements of effective adult learning processes, such as learning activities and opportunities for discussion. However, there has not been research on the effectiveness of the content module organization and the training format.

Tier 1: Universal Promotion

Tier 1 strategies include building positive relationships with children, families, and colleagues. Children need positive relationships with the adults in their lives and also other children. The section also recognizes that positive relationships are needed between providers in order for them to be able to provide positive experiences for the children. A universal need for all children is high quality environments. This includes the physical set up of classrooms, use of developmentally appropriate activities, and activities that promote active child engagement. For young children, an important element of appropriate activities includes uses of daily routines and schedules as opportunities for building positive relationships and learning appropriate behaviors. In addition, the importance of appropriately planning transitions so they are positive experiences and not contexts when challenging behaviors can occur. Other strategies that are often used within this tier include use of visual cues and reminders, and positive feedback and encouragement. Many of these strategies are well known to early childhood providers as best practices. These practices serve as the foundation or necessary underpinnings for more structured and individualized strategies used with children who are at-risk or have identified behavioral needs.

Tier 2: Secondary Prevention

Secondary prevention strategies include more structured teaching for children who display challenging behaviors that are not always typical for children in an age group. They require more focused direct teaching on specific skills such as teaching them friendship skills, how to share, being helpful, taking turns, making apologies, and giving complements. Many children learn these skills by being told by teachers, given occasional reminders and practice. Some children need more structured learning, so teachers may develop games or activities that teach these children the skills and give

them additional opportunities to practice. Additional skills at this level include enhancing emotional literacy, or understanding feelings in self and others, controlling anger and impulses. CSEFEL provides resources that can be used at this level, such as suggested activities for commercially available children's books, the use of scripted stories used to teach children appropriate skills, and cue cards and posters describing appropriate classroom behaviors. A number of research studies have shown that these strategies can be conducted in general and special education early childhood classrooms (English, Goldstein, Shafer, & Kaczmarek, 1997; Wood, Ferro, Umbreit, & Liaupsin, 2011).

Tier 3: Tertiary Interventions

Children requiring tertiary interventions usually require structured individualized behavior support plans. Behavior support plans are best developed by a team of professionals who can give a comprehensive view of the child and his/her needs, and include the parents in planning and evaluating the plans. Development of the intervention plans starts with systematic collection of data about the child's behavior that attempts to identify possible functions of the behavior, or purposes that the behavior serves for the child. These functions usually fall into two broad categories, to either obtain or escape something (such as attention, activities, objects). For example, a child may hit peers to obtain the teacher's attention (even if this attention is negative in the form of teacher reprimanding the child), another child may hit peers to escape activities (having to clean up toys). After data are gathered and a hypothesized function is identified, an intervention is developed to address this function. Then replacement skills are taught to the child to replace the inappropriate behavior with more acceptable behaviors that serve the same purpose. Interventions include strategies to use when children engage in problem behaviors. In addition, progress monitoring data are gathered frequently to evaluate the effectiveness of any intervention. Progress monitoring data are often graphed for easier interpretation by professionals and families. Studies have shown that when data are gathered about children's responses to interventions, the children make greater growth (Lentz, Allen, & Ehrhardt, 1996; Stecker & Fuchs, 2000). CSEFEL training includes information about how teachers and other early childhood practitioners can conduct basic functional behavioral

assessments, and how to work with other professionals to conduct more complex assessments for more serious challenging behaviors.

Iowa participation with CSEFEL. In 2006 several PBIS training efforts using the CSEFEL modules were being conducted for early childhood care and education personnel in the state. Funding was obtained to train Head Start teachers, childcare providers, and other early care and education providers at no cost to the providers or centers. A team was assembled to provide leadership around improving practices regarding children's behavior. In 2007 the state leadership team's efforts were expanded by entering into an agreement with CSEFEL staff. CSEFEL provided technical assistance to the leadership team and training to providers around the state. Much of the training was focused on training professionals who could then provide training to local providers. CSEFELs involvement ended in 2011. The state leadership team will continue to support training and coaching throughout the state. During the past 5 years over 200 providers have been trained in use of CSEFEL modules. These providers represent Head Start, Area Education Agencies (AEAs), Child Care Resource & Referral (CCRR), ISU Extension, local school districts, public health, community empowerment areas (CEA), 1st 5 programs, and private mental health agencies have received training on the infant/toddler and/or the preschool modules. In addition training has been provided to more than 140 professionals who serve as coaches to help providers implement the strategies with greater fidelity. Analysis of information provided by classroom teachers between 2006 and 2010 showed an increase in classroom quality, decrease in behavior incidents reports, and an improvement in children's social skills (based on teacher report using the Social Skills Rating Scale; see report at http://csefel.vanderbilt.edu/resources/states.html#iowa - [Iowa Program-Wide Positive Behavior Support 3-Years of Data](http://csefel.vanderbilt.edu/resources/states.html#iowa)).

Iowa State University Coaching Project. In an effort to improve fidelity of implementation, since 2008, Iowa State University has a contract with the Iowa Department of Education to provide coaching to centers who applied for additional support. Trainers from ISU have developed a new model for providing training on the CSEFEL modules. Instead of providing training on all the modules over 4 days, then coaching teachers to implement the strategies with fidelity, the new training model

involved training on parts of each module, providing coaching until teachers implemented each set of strategies with fidelity, and then train on the next set of strategies in the modules. This cycle continues until all modules have been covered. The coaching process used includes modeling skills for teachers, engaging in reflective discussion about practices, brainstorming solutions, and assisting with developing materials to implement intervention strategies that are part of the pyramid model. To date, coaching has been provided in 51 classrooms representing 19 centers. While no research was conducted about the effectiveness of this training and coaching model in the first few years, research is being conducted in the current year.

Focused early childhood mental health prevention approaches: Improving attachment
Beth Troutman

A number of focused early childhood mental health prevention approaches seek to improve security of infant-caregiver attachment in populations with insecure attachment or who are at risk for insecure attachment. In low risk populations, 62% of infants are securely attached to their primary caregiver (van Ijzendoorn, Schuengel, & Bakermans-Kranenberg, 1999). Longitudinal studies indicate a secure attachment relationship with a primary caregiver provides a foundation for healthy social and emotional development. The greatest risk for later mental health problems is associated with the disorganized type of insecure attachment.

In the past two decades, there have been significant advances in our understanding of how to intervene to improve security of attachment for infants and young children. However, relatively few providers outside of academic settings have been trained in research-based or evidence-based attachment interventions. There are currently very few providers in Iowa who are trained in research-based or evidence-based attachment interventions. Research on effective interventions for attachment is reviewed in order to provide information on factors associated with insecure attachment and the *types* of interventions that have been found to be effective in promoting secure attachment.

Child Parent Psychotherapy (CPP)

Tracy Moran and Beth Troutman

Description of intervention: CPP is a long-term (average 50 sessions) dyadic approach to treatment for children ages birth to six and their caregiver, designed to increase the security of child-parent attachment in at-risk populations by addressing how issues from the parent's past affects the parent-child relationship (Lieberman & Van Horn, 2005; Lieberman, Weston, & Pawl, 1991). The approach is based on infant-parent psychotherapy, a psychoanalytic approach developed by Selma Fraiberg (1980) to treat problems in infant-parent relationships. However, the approach also draws from attachment theory and research. The goals of this approach are helping the parent connect feelings of fear and anger associated with difficult childhood experiences to feelings of fear and anger toward their child, perceptions of their child, and interactions with their child. The approach also addresses the role of current stress and culture in the parent's relationship with their child. Treatment sessions involve both the parent and child. This approach has been delivered in an office playroom or in the home. Sessions are relatively unstructured as the therapist addresses themes as they emerge in the parent-child interactions during the session. The therapist's ability to be empathic and serve as a secure base for the parent to explore past conflicts and new ways of interacting is considered a critical component of this intervention.

Description of training: Mental health providers must have a minimum of a Master's degree in order to be trained in CPP. A number of different models have been used to train providers in CPP. Typically, training involves an initial 3-day workshop followed by 3 2-day workshops or 2 3-day workshops. Training in CPP also involves regular case consultation and reflective supervision.

Evidence Base: CPP has been researched in several different at-risk populations. The quality of research on CPP is extremely good. Outcome studies have used randomized controlled trials and well-established outcome measures (observational and parent report). Outcome studies on CPP are organized according to target population. Research on outcomes for low-income, insecurely attached infants and children of depressed mothers are reviewed below. Research on the use of CPP for problems associated with trauma exposure are reviewed in the section on trauma exposure.

Low-income, insecurely attached infants

The first published study of CPP was a randomized controlled trial examining its efficacy in insecurely attached 1-year-olds in a low-income Spanish speaking sample (Lieberman, et al., 1991). Although CPP did not have a significant impact on attachment security in this initial study, mothers receiving CPP were more empathic and their children expressed less anger towards their mothers. Consistent with CPP's theory of change, level of therapeutic process predicted attachment security.

Young children of depressed mothers

In two studies of young children of depressed mothers, CPP was effective at increasing the security of child-parent attachment(Cicchetti, Toth, & Rogosch, 1999; Toth, Rogosch, Manly, & Cicchetti, 2006). CPP did not have an effect on maternal depression and severity of maternal depression did not moderate the impact of CPP.

Training and implementation in Iowa: There are currently three therapists in Iowa who have completed training in CPP. Two of these therapists are in Polk county and the other therapist is in Pottawatamie county.

University of Leiden home visiting intervention for low-income irritable infants

Beth Troutman

Description of intervention: Dr. Dymphna van den Boom, a doctoral student in psychology with several years experience as a special education teacher, developed a brief (3 session) home visiting intervention targeting low-income mothers and their 6- to 9-month-old irritable infants (D. van den Boom, 1988, 1994; D van den Boom, 1995). Infants are identified as irritable as neonates using two administrations of the Neonatal Behavioral Assessment Scale (Brazelton, 1973; Kaye, 1978). The home visiting intervention was developed by conducting extensive home observations of 30 infants (15 irritable and 15 nonirritable) to determine how infant-mother interactions differed for irritable and nonirritable infants. The intervention uses detailed behavioral coding of the infant-mother interaction at the beginning of each session to develop an

individualized treatment plan that focuses on increasing the mother's sensitive responsiveness to the infant's cues.

Evidence base: In a randomized, controlled trial of 100 infant-mother dyads, this intervention was found to be highly effective with 68% of irritable infants in the intervention group securely attached to their mothers and only 28% of irritable infants in the control group securely attached to their mothers.

Description of training: The 10-day individual training with Dr. van den Boom at the University of Amsterdam focuses on learning the behavioral coding of infant-mother interactions and how to use the behavioral coding to develop an individualized treatment plan.

Relevance to Iowa/lessons learned: One Iowa therapist has been trained in this intervention. It became clear during the intervention training that there were significant cultural differences between the Netherlands and Iowa that were likely to limit the effective implementation of this intervention in Iowa. Specifically, the Netherlands places a greater emphasis on interventions that are believed to promote infant mental health than Iowa. Two specific examples are: 1) the Netherlands has universal home visiting for infants and their families that includes a wide range of support during the postpartum period and 2) the Netherlands provides paid maternal leave. As a result of the Netherlands' maternal leave policy and cultural differences in expectations for mothers, infants in the Netherlands are rarely cared for by nonfamily members during their first year. In a pre-implementation study of 48 Iowa families (22 with irritable infants and 26 with nonirritable infants), amount of time in nonfamilial child care was a major factor in security of infant-mother attachment for irritable infants. 89 % of irritable infants who averaged less than 10 hours a week in nonfamilial child care during their first year were securely attached compared to 38 % of irritable infants who averaged more than 10 hours per week in nonfamilial child care (Troutman, Arndt, Caspers, & Yucuis, 2010).

Circle of Security (COS)

Beth Troutman

Circle of Security (COS) in an approach to improving child-parent attachment that includes several different protocols developed to address the needs of specific populations. Each protocol is based on attachment theory, object relations theory, and family systems theory. In a review of interventions based on attachment theory, the COS approach was described as "the one most directly derived from attachment theory and research" (Berlin, Zeanah, & Lieberman, 2008).

The Circle of Security - Home visiting – 4 intervention (COS-HV4) for irritable infants

Description of intervention: This intervention builds on the work on infant irritability and attachment by Dr. van den Boom at the University of Leiden (D. van den Boom, 1988, 1994; D van den Boom, 1995) and the COS 20-week group intervention (described below). Similar to Dr. van den Boom's intervention, infants are identified as irritable as neonates using two administration of the Neonatal Behavioral Assessment Scale (NBAS) (Brazelton, 1973; Kaye, 1978) but the intervention is delivered when infants are 6 to 9 months of age.

The COS-HV4 intervention is a 4 session intervention delivered in the home with the baby present (Cassidy, Woodhouse, Sherman, Stupica, & Lejuez, 2011). The intervention is tailored to the individual characteristics of each infant-parent dyad. Core components of the intervention include: helping mothers recognize infant signals, helping mothers attend to both attachment and exploratory behaviors, and exploring how the mother's cognitive and emotional responses to the infant's behavior influences her behavior. Review of videotaped infant-parent interactions (filmed during a 30 minute in-home session on the previous day) is used to emphasize instances where the mother was sensitive to the infant's needs and help the mother reflect on problematic infant-parent interactions.

Evidence base: In a randomized controlled trial, 220 first-born irritable infants and their economically stressed mothers received either the COS HV-4 intervention or a control intervention (three 1 hour psychoeducational sessions) (Cassidy, et al., 2011). The rate of secure attachment in the intervention group (60%) did not differ significantly from the rate of secure attachment in the control group (50%). Rates of disorganized attachment in the two groups were also similar (14% vs. 18%). However, the intervention did appear to be effective for certain subgroups. Specifically, highly irritable infants whose mothers had secure or dismissing attachment styles were more likely to be securely attached if they were in the intervention group.

COS group protocol for at-risk Head Start preschoolers

Description of intervention: The COS group protocol is a 20-week intervention for parents of young children identified as moderate risk for parent-child problems by Head Start staff (Cooper, Hoffman, Powell, & Marvin, 2005; Hoffman, Marvin, Cooper, & Powell, 2006). Prior to the parenting group, each parent participates in a videotaped, standardized assessment with their child assessing child-parent attachment. Parents are also interviewed about their child and complete standardized assessments. This evaluation is used to develop an individualized treatment plan for each parent. The videotapes of child-parent interactions are used to teach parents about attachment theory, help parents use their understanding of attachment theory to understand their child's needs, and help parents reflect on their pattern of interactions with their child and circumstances where they fail to respond to their child's needs.

Evidence base: An open trial of the COS group protocol found a significant increase in the number of child-parent dyads with a secure attachment relationship (from 20% at pre-intervention to 54% at post-intervention).

COS protocol for women in jail diversion program

Description of intervention: A prenatal-early infancy COS protocol was developed for Tamar's children, a jail diversion program in Baltimore, Maryland for women with a history of substance abuse who are involved in the criminal justice system (Cassidy et al., 2007).

Evidence base: In an open trial of 19 infant-mother dyads, 68% of the dyads were securely attached, a rate comparable to low-risk samples.

COS parent education DVD

Description of intervention: An 8 chapter DVD has been developed to educate caregivers about attachment theory. The DVD was designed to be integrated into home visiting programs are used in parent education groups.

Training in COS principles: There are 3 different trainings offered by COS: a 2-day COS introductory training that provides a basic understanding of attachment theory, a 4-day training on using the 8 chapter COS parent education DVD to educate caregivers about attachment theory, and a 10-day intensive COS training in using attachment theory and standardized assessment of the quality of attachment to diagnose parent-child relationship struggles and develop a comprehensive treatment plan. Following the 10-day COS training, mental health providers can take an examination in order to be certified in COS assessment and treatment planning. It is recommended providers receive supervision in implementing COS with two parenting groups following the training. Information about COS training is available at: http://www.circleofsecurity.net/.

Implementation in Iowa: In 2008, 78 Iowa providers attended the 2-day COS introductory training at the University of Iowa. This summer a brief follow-up survey was sent to providers who had completed the 2-day COS training. There were 11 responses to the survey. The majority of individuals responding indicated the children and families they worked with had benefited from the training (estimated number of children/families who had benefited ranged from 0 to 200). Nine of the 11 individuals responding to the survey indicated additional training and/or supervision in COS would enhance their ability to provide early childhood mental health services.

Since 2008, 4 mental health providers in Iowa have completed the 10-day COS intensive training. Although the providers have integrated COS concepts into their clinical work, they are not delivering COS with fidelity as they have not completed the COS assessment and treatment planning exam or been supervised in providing COS groups. In 2009, 3 Iowa mental health providers who had completed the 10-day COS training piloted the COS DVD.

Interventions for early childhood mental health problems

Beth Troutman

Interventions for early childhood mental health problems are typically provided by mental health providers with graduate degrees in a mental health field and additional training focused on interventions for young children. Many people are surprised to hear the term "mental health" applied to young children. It is possible to diagnosis mental health problems in young children and early treatment of these problems is often more effective than postponing treatment until the child is older. Research on interventions for two diagnoses commonly seen in young children referred for mental health services are reviewed: disruptive disorders and autism spectrum disorders. Interventions for social-emotional problems associated with trauma-exposure are also reviewed. Interventions for specific traumas include exposure to intimate partner violence, maltreatment, and placement in foster care.

Disruptive Disorders

Beth Troutman

Disruptive behavior (e.g. noncompliance, aggression, overactivity) is frequently seen in young children referred to mental health professionals (Egger & Angold, 2006). Disruptive disorders (i.e. psychiatric disorders where these behaviors occur more frequently than in other children of the same age and interfere with functioning) include: Attention Deficit Hyperactivity Disorder, Oppositional Defiant Disorder, and Conduct Disorder. Mental health providers who have not had specialized training in diagnosing young children are often reluctant to diagnose these disorders in children under age 6. However, research using standardized assessments indicates these diagnoses can be reliably diagnosed in children as young as 2 (Egger & Angold, 2006). Furthermore, the rates of disruptive disorders in 2- to 5-year-old children is similar to the rates seen in older children (Egger & Angold, 2006). Research on the epidemiology of disruptive disorders indicates the importance of using standardized assessments that consider the prevalence of behaviors at different ages and base diagnoses on the range

of symptoms the child is exhibiting. For example, although 2-year-olds are more likely to defy their parents than older children, it is possible to diagnosis Oppositional Defiant Disorder in a 2-year-old by evaluating their rate of noncompliance compared to other children of the same age and whether they are exhibiting other symptoms of Oppositional Defiant Disorder.

Parent-Child Interaction Therapy (PCIT)
Beth Troutman

Description of intervention: Parent-Child Interaction Therapy is a dyadic approach that focuses on improving the quality of the parent-child relationship in order to reduce symptoms of Oppositional Defiant Disorder, Attention Deficit Hyperactivity Disorder, and Conduct Disorder in young children (aged 2 to 7) (Eyberg, Boggs, & Algina, 1995). A therapist behind a one-way mirror communicates with the parent through a transmitter in the parent's ear while they are interacting with their child. This allows the therapist to provide ongoing feedback in order to change the parent's pattern of interaction with the child. There are two phases to the therapy: child-directed interaction (CDI) and parent-directed interaction (PDI). CDI focuses on increasing positive interactions between the parent and child. PDI focuses on increasing the child's compliance and decreasing their aggression. Response to PCIT and specific treatment goals are assessed each session by having the parent complete a standardized assessment of the child's disruptive behavior and conducting a brief, behavioral assessment of the parent's interactions with the child. PCIT continues until the parent and child exhibit positive interactions (e.g. parent frequently praises the child, parent rarely criticizes the child, and child follows the majority of the parent's commands the first time they are given) and the child's level of disruptive behavior is in the normal range. Length of treatment is typically 12 to 20 sessions.

Evidence base: There are numerous studies indicating PCIT is an effective intervention for disruptive disorders in young children. Research supporting outcomes associated with PCIT has used well-established outcome measures. Both standardized observational assessments and parent report measures have been used to assess outcomes. Outcome studies include both open trials and randomized controlled trials.

In an open trial of PCIT in 24 young children (aged 2 to 7) who met criteria for either Oppositional Defiant Disorder, Attention-Deficit Hyperactivity Disorder, or Conduct Disorder, children exhibited significant increases in compliance and significant decreases in disruptive behavior, activity level, anxiety, and depression following treatment (Eisenstadt, Eyberg, McNeil, Newcomb, & Funderburk, 1993). In addition, their mothers exhibited significant decreases in parenting stress. Improvements in disruptive behavior and parenting stress were maintained at a follow-up conducted 6 weeks following termination of treatment (Eisenstadt, et al., 1993). In a randomized controlled trial of 64 young children (aged 3 to 6) who met criteria for Oppositional Defiant Disorder, parent-child dyads who participated in PCIT had more positive parent-child interactions following treatment than the wait list control group (Schuhmann, Foote, Eyberg, Boggs, & Algina, 1998). Children in the PCIT group exhibited significant decreases in disruptive behavior and their parents exhibited significant decreases in parenting stress. In a follow-up to the Schuhmann et al. (1998) study, 23 mothers were contacted 3 to 6 years following completion of PCIT. Maternal ratings of disruptive behavior indicated their children continued to maintain the decreases in disruptive behavior that were seen at the posttreatment assessment (Hood & Eyberg, 2003). In a randomized controlled trial of 54 young children (aged 3 to 5) in Australia, mothers who participated in PCIT had significant reductions in parenting stress and significant increases in positive parent-child interactions compared to the wait list control group (Nixon, Sweeney, Erickson, & Touyz, 2003). Children who participated in PCIT exhibited significant reductions in disruptive behavior and significant increases in compliance to parental commands compared to the control group. In a follow-up of this sample conducted one year and two years post-treatment, there continued to be significant reductions in parenting stress and disruptive behavior and significant increases in positive parent-child interactions and compliance compared to pre-treatment levels (Nixon, Sweeney, Erickson, & Touyz, 2004).

In a randomized controlled trial of 30 young children (aged 3 to 6) with clinically significant aggression, Oppositional Defiant Disorder, and mild or moderate Mental Retardation, mother-child dyads who participated in PCIT had more positive mother-child interactions following treatment than the wait list control group (Bagner & Eyberg,

2007). Children in the PCIT group were more compliant and exhibited fewer disruptive behaviors following treatment than children in the waitlist control group (Bagner & Eyberg, 2007). Research on the efficacy of PCIT for children exposed to trauma is reviewed in the section on trauma exposure.

Description of training: Individuals must have either a master's degree or a doctorate in a mental health profession in order to be trained in Parent-Child Interaction Therapy. Recommended training to become proficient in PCIT occurs in small groups (8 or less). Training involves an initial 40 hour training which includes observation and feedback while role-playing skills and working with a live parent-child dyad. This is followed by monthly telephone consultation on the therapists' PCIT cases for 8 to 12 months and a 16 hour training which includes observation and feedback on videotapes and live parent-child dyads. Prior to training other therapists in their agency, it is recommended that therapists complete several PCIT cases and receive additional training and consultation in PCIT.

Implementation in Iowa: In the past 4 years, Dr. Beth Troutman, University of Iowa, and Dr. Cheryl McNeil, University of West Virginia, have conducted initial 40 hour PCIT training with 89 mental health providers from Iowa and adjoining states (Iowa: 84; Nebraska: 4; Illinois: 1). The full 60 hours of training in PCIT has been completed by 61 mental health providers in Iowa and Nebraska. A map of the location of therapists completing initial training in PCIT in displayed below. In January, 2011, a brief survey about utilization of PCIT following training was completed by 60 therapists who had completed the initial 40 hour training in PCIT (Troutman, 2011). Providers who responded had utilized PCIT with a total of 1,091 children following training. Therapists utilized PCIT with an average of 1.5 new children per month following the training.

The majority of Iowa therapists trained in PCIT have been trained in the past 18 months. The Iowa therapists trained in PCIT come from 27 counties – primarily on the western and eastern sides of the state. A map showing the location of PCIT therapists at the time they completed the initial 40 hour training is displayed below. A web site listing contact information for Iowa therapists who have completed training in PCIT is

available at:

http://www.healthcare.uiowa.edu/icmh/ParentChildInteractionTherapy.htm.

Lessons learned: In the past 4 years, there has been a relatively rapid growth of interest in PCIT and, subsequently, a rapid growth in the number of Iowa children and families receiving PCIT. It is unlikely this rapid growth reflects an increase in disruptive behavior among young children. Instead, it likely reflects the gap in effective evidence-based mental health approaches for young children in Iowa.

Mental Health Providers (Master's or Doctorate) Who Completed 40 Hour Training in Parent-Child Interaction Therapy (PCIT) July, 2007 – August, 2011

Teaching Interventions to Empower and Strengthen Families (TIES)

Kelly Pelzel

Description of intervention: Teaching Interventions to Empower and Strengthen Families (TIES), is a behavioral intervention program for children under the age of six residing in Linn County. It is very closely modeled on the Regional Intervention Project (RIP; http://www.ripnetwork.org/). Faculty at Peabody College (Vanderbilt University) first established the RIP in 1969. RIP services were first provided to very young children with autism, but then expanded to other young children with a variety of diagnoses in need of behavioral treatment. Since 2010, the TIES program has been a fully accredited member of the RIP Expansion Project. Since its launch in 2008 the TIES program has been housed in St. Luke's Hospital's Resource Center and coordinated by Craig Meskimen, MSW. With no financial cost to participating families, TIES is funded through partnerships with Abbe CMHC, Grant Wood AEA, Healthy Linn Care Network, Mercy Medical Center, St. Luke's Hospital and the Linn County Community Empowerment.

A child can be enrolled in TIES if a caregiver has significant concerns about one or more aspects of their child's behavior functioning. The child and at least one caregiver attend two-hour programming twice weekly. Additional caregivers (e.g., grandparents) and siblings can attend programming with the caregiver(s) and child. Participation is divided into two phases: Active and Payback. During the Active phase caregivers learn how to manage their child's behavioral problems. During the Payback phase caregivers assist families still in Active treatment. RIP data suggest that, on average, families completing the intervention attend 24 treatment sessions and 24 payback sessions within a 7-month period (Strain & Timm, 2001). TIES treatment modules include Behavioral Skills Training (BST), Social Skills Training (SST), and the Preschool Classroom. BST skills include shaping, extinction, differential reinforcement and effective time-out. Caregiver-child dyads participate in structured interaction sessions. Interval-based behavioral observation data (of both the parent's use of skills and child's behavior) are used to measure progress. Across sessions there is increasing

emphasis on generalization of skills. SST skills, which are taught through adult-supervised peer interactions in a preschool classroom-like setting, include appropriate communication, problem solving, sharing, mutual assistance, and conflict resolution. Finally, the Preschool Classroom module allows caregivers to practice newly acquired skills with children besides their own and also affords a more generalized environment for children to demonstrate appropriate behavior.

Evidence base: The RIP intervention studies completed to date suggest that it is an effective approach. Strain and Timm (2001) summarize: (1) Single-subject ABAB reversal designs with over 1,300 children suggests the RIP strategies decrease problem behavior, (2) Follow-up behavioral observation studies of children from two different RIP cohorts (with different intervention staff) conducted 3-9 years post-treatment in homes and schools suggest that appropriate behavior is generally maintained over time, particularly for children that were enrolled in RIP at younger ages, and (3) Follow-up interviews with adolescents and adults enrolled in RIP as children suggest long-term maintenance of treatment gains and high treatment acceptability. Interestingly, these authors note neither children's severity of oppositional behavior nor caregiver's attention to these behaviors prior to treatment predicted treatment outcome. The RIP is a good example of an intervention program in which investigators collected huge sums of efficacy data (including substantial behavioral observation data using an observational system) prior to the existence of current evidence-based practice criteria, such as randomized control trials (Maag & Katsiyannis, 2010).

Autism Spectrum Disorders
Scott Lindgren

Autism spectrum disorders (ASDs) are a group of neurodevelopmental disabilities defined by significant impairments in social interaction, deficits in communication, and the presence of rigid behaviors and restricted interests. The thinking and learning abilities of people with ASDs can vary – from gifted to severely limited. ASD typically begins before the age of 3 and can create challenges throughout a person's life. ASD occurs in all racial, ethnic, and socioeconomic groups and is at least four times more likely to occur in males than females. The primary ASDs are Autistic

Disorder (or "autism"), Asperger's Disorder, and Pervasive Developmental Disorder - Not Otherwise Specified (PDD-NOS). These conditions share many of the same behaviors, but they differ in terms of when the behaviors start, how severe they are, and the precise pattern of problems.

Early identification is a key to early intervention, which has been shown to have a significantly positive effect on long-term outcomes for children with ASD. Early signs of autism are often noticed by 18 months of age, or even earlier. Appropriate treatment of ASD should begin with a careful assessment to determine the child's specific strengths and needs. An accurate diagnosis is based on systematic interviewing, observation, and assessment of the child's communication, social interaction, behavior, and developmental level. In addition to assessing the key symptoms of autism, a review of sleep, feeding, coordination problems, and sensory sensitivities is often recommended.

Several screening and assessment tools have been developed to specifically assess for the presence of ASD in children and adolescents. Use of brief autism screening checklists such as the Modified Checklist for Autism in Toddlers (M-CHAT) at ages 18-24 months can be very helpful in early identification of an ASD by health care providers or early educators. Although ASD screenings may be completed by a number of different professionals (e.g., primary care physicians, speech pathologists, teachers, etc.), the diagnosis of ASD should typically be made by a psychologist, psychiatrist, or developmental-behavioral pediatrician who has been trained in the diagnosis of ASD. Observation tools such as the Autism Diagnostic Observation Schedule (ADOS) and structured diagnostic interviews such as the Autism Diagnostic Interview – Revised Early signs of autism are often noticed by 18 months of age, or even earlier. Some early signs or "red flags" that a child may have an ASD include the following:

- Lack of or delay in spoken language
- Repetitive use of language
- Little or no eye contact
- Lack of interest in other children
- Lack of spontaneous or make-believe play
- Persistent fixation on parts of objects

- Poor response to his/her name

- Fails to imitate caregivers

- Motor mannerisms (e.g., hand-flapping)

- Fails to point or show joint attention

Identifying treatments based on strong scientific evidence was the goal of the National Professional Development Center on Autism Spectrum Disorders (NPDC) (National Professional Development Center on Autism Spectrum Disorders, 2011) and the National Standards Report of the National Autism Center (National Autism Center, 2009). The NPDC analysis was based on a balanced strategy for combining the results of randomized, quasi-experimental, and single-subject studies to establish an evidence base for a particular type of treatment or specific intervention strategy. It also provides extensive materials for training providers on specific evidence-based strategies.

The two major approaches with strong support for use with young children, Early Intensive Behavioral Intervention (EIBI) and Developmental Programs, are described briefly below.

Early Intensive Behavioral Intervention (EIBI)
Scott Lindgren and Kelly Pelzel

Early Intensive Behavioral Intervention (EIBI) includes a number of specific behavioral interventions that employ Applied Behavioral Analysis (ABA) techniques. ABA is defined as the process of applying behavioral principles to change specific behaviors and simultaneously evaluating the effectiveness of the intervention. ABA emphasizes both prevention and remediation of problem behavior. Significant attention is given to the social and physical environment, including the antecedent conditions and consequences that elicit and maintain behavior. Numerous empirical studies have documented the effectiveness of ABA with children with ASD. These interventions should typically be provided under the supervision of a trained behavioral psychologist or behavior analyst. Research suggests that the best outcomes occur when ABA is initiated early in development, preferably prior to 5 years of age. There is an ongoing debate about the amount of ABA needed in order for it to be optimally effective, with recommendations typically ranging from 15 to 40 hours per week, depending on

whether ABA is being applied to comprehensive educational programming in the schools or to a targeted behavioral treatment program. Training caregivers to provide ABA in the home or community settings is an important part of most ABA programs. University of Iowa investigators are finding telehealth to be an effective strategy for providing ABA in rural and other underserved areas. ABA delivered through as little as 1 hour per week of parent training can be effective in reducing behavior problems and building social communication in children with ASD. This intervention can be used with all ages and ability levels, and ABA principles are often included as part of effective early intensive intervention programs. Specific ABA interventions include programs such as Discrete Trial Training (DTT; e.g., Lovaas; http://www.lovaas.com/index.php), Functional Communication Training (FCT; http://autismpdc.fpg.unc.edu/content/functional-communication-training), and Pivotal Response Training (PRT; http://autismlab.ucsd.edu/about/pivotal-response-training.shtml). Intensive early intervention programs that provide ABA strategies, sometimes in combination with developmental approaches (please see below), have been shown to produce improvements in behavior, communication, and cognitive abilities. Lovaas-based approaches (e.g., DTT) are the most widely used and have an accepted research base.

Developmental Programs
Kelly Pelzel and Scott Lindgren

Developmental programs address core social deficits associated with autism spectrum disorders. Roger and Dawson's Early Start Denver Model (Denver Model; http://www.ucdmc.ucdavis.edu/mindinstitute/research/esdm/) is presently the developmental program with the most research support. A randomized controlled trial of the Denver Model produced positive outcomes for young children with ASD. It should be noted that the Denver Model does employ some ABA techniques as well as social activities meant to build social communication skills. The Denver Model has a clearly outlined certification process for being trained and certified to deliver this model (http://www.ucdmc.ucdavis.edu/mindinstitute/research/esdm/certification.html). A successful randomized trial for another hybrid program, the Learning Experiences and Alternative Program for Preschoolers and Parents (LEAP;

http://www.thewatsoninstitute.org/nu_upload/LEAP_info_sheet.pdf), has been completed as well. Although these studies are not without methodological limitations, the NAC review designated comprehensive behavioral treatment for young children using programs of this type as "established treatments."

Two other popular developmental programs for young children with ASDs are Developmental, Individual-Difference, Relationship Based (DIR) model (i.e., Floortime) and Social Communication, Emotional Regulation, Transactional Supports (SCERTS). At the time of this paper neither program had yet to establish a strong evidence base (i.e., no randomized controlled trials).

Additional approaches for young children with ASD include: augmentative and alternative communication (AAC), Picture Exchange Communication System (PECS), modeling visual supports, computer-aided instruction, and parent-implemented intervention. The table below lists interventions that the NPCD and NSP found to be effective in improving social communication, building adaptive skills, and/or reducing problem behaviors in children with ASD. Additional information about ASD interventions is provided by Lindgren and Doobay (2011).

Overlap Between Evidence-Based Practices Identified by the National Professional Development Center (NPDC) on ASD and the National Standards Project (NSP)											
Evidence-Based Practices Identified by the National Professional Development Center (NPDC) on ASD	Established Treatments Identified by the National Standards Project (NSP)										
	Antecedent Package	Behavioral Package	Story-based Intervention Package	Modeling	Naturalistic Teaching Strategies	Peer Training Package	Pivotal Response Treatment	Schedules	Self-Management	Comprehensive Behavioral Treatment for Young Children	Joint Attention Intervention
Prompting	X			X						The NPDC on ASD did not review comprehensive treatment models. Components of The Comprehensive Behavioral Treatment of Young Children overlap with many NPDC-identified practices.	The NPDC on ASD considers joint attention to be an outcome rather than an intervention. Components of joint attention interventions overlap with many NPDC-identified practices.
Antecedent-Based Intervention	X										
Time delay	X										
Reinforcement		X									
Task analysis		X									
Discrete Trial Training		X									
Functional Behavior Analysis		X									
Functional Communication Training		X									
Response Interruption/Redirection		X									
Differential Reinforcement		X									
Social Narratives			X								
Video Modeling				X							
Naturalistic Interventions					X						
Peer Mediated Intervention						X					
Pivotal Response Training							X				
Visual Supports								X			
Structured Work Systems								X			
Self-Management									X		
Parent Implemented Intervention	The NSP did not consider parent-implemented intervention as a category of evidence-based practice. However, 24 of the studies reviewed by the NSP under other intervention categories involve parents implementing the intervention.										
Social Skills Training Groups	Social Skills Training Groups (Social Skills Package) was identified as an emerging practice by the NSP.										
Speech Generating Devices	Speech Generating Devices (Augmentative and Alternative Communication Device) was identified as an emerging practice by the NSP.										
Computer Aided Instruction	Computer Aided Instruction (Technology-based Treatment) was identified as an emerging practice by the NSP.										
Picture Exchange Communication	Picture Exchange Communication System was identified as an emerging practice by the NSP.										
Extinction	Extinction (Reductive Package) was identified as an emerging practice by the NSP.										

Principles of ASD intervention

Scott Lindgren

The American Academy of Pediatrics (Myers & Johnson, 2007) has made a clear statement about the basic principles that underlie effective ASD interventions: "There is a growing consensus that important principles and components of effective early childhood intervention for children with ASDs include the following:

- Entry into intervention as soon as an ASD diagnosis is seriously considered rather than deferring until a definitive diagnosis is made;
- Provision of intensive intervention, with active engagement of the child at least 25 hours per week, 12 months per year, in systematically planned, developmentally appropriate educational activities designed to address identified objectives;
- Low student-to-teacher ratio to allow sufficient amounts of 1-on-1 time and small-group instruction to meet specific individualized goals;
- Inclusion of a family component (including parent training as indicated);
- Promotion of opportunities for interaction with typically developing peers to the extent that these opportunities are helpful in addressing specific educational goals;
- Ongoing measurement and documentation of the individual child's progress toward educational objectives, resulting in adjustments to programming when indicated;
- Incorporation of a high degree of structure through elements such as predictable routine, visual activity schedules, and clear physical boundaries to minimize distractions;
- Implementation of strategies to apply learned skills to new environments and situations (generalization) and to maintain functional use of these skills; and
- Use of assessment-based curricula that address:functional, spontaneous communication; social skills, including joint attention, imitation, reciprocal

interaction, initiation, and self-management; functional adaptive skills that prepare the child for increased responsibility and independence; reduction of disruptive or maladaptive behavior by using empirically   supported strategies, including functional assessment; cognitive skills, such as symbolic play and perspective taking; and traditional readiness skills and academic skills as developmentally indicated."

Trauma exposure
Beth Troutman

Exposure to trauma has a significant impact on the social-emotional development of young children. When the trauma involves caregivers (e.g. violence between caregivers) or maltreatment by caregivers (e.g. physical abuse, neglect, or sexual abuse), the impact can be especially devastating for young children given their physical and emotional dependence on their caregivers.

Trauma-Focused Cognitive Behavioral Therapy (TF-CBT)
Kelly Pelzel

Description of intervention: Trauma-Focused Cognitive Behavioral Therapy (TF-CBT; (J. Cohen, Mannarino, & Deblinger, 2006) is aimed at treating clinically significant trauma symptoms (e.g. DSM-IV-TR PTSD symptoms) in children as young as three. A subset of children exposed to traumatic events, such as physical abuse, sexual abuse, and exposure to violent or life-threatening acts, will develop clinically significant trauma symptoms. TF-CBT, developed by Judith Cohen, Anthony Mannarino, and Esther Deblinger, is designed to address trauma symptomology as well as comorbid anxiety and depression symptoms through the development of core skills and the processing of a trauma narrative. Although there is a behavior management component to TF-CBT, it is not a treatment for addressing significant disruptive behavior problems that existed prior to the trauma exposure (e.g., a child with pre-existing Oppositional Defiant Disorder that continues to display problem behavior). TF-CBT is primarily child-focused, though it does employ parent and conjoint psychotherapy sessions in addition to individual sessions (12-16 sessions total). TF-CBT is generally not used in a group format (please see CBITS, (Jaycox, 2004) as an alternative for groups of older

children). Core TF-CBT components are summarized in the acronym "PRACTICE": <u>P</u>sychoeducation and <u>P</u>arenting Skills, <u>R</u>elaxation, <u>A</u>ffective modulation, <u>C</u>ognitive coping and processing, <u>T</u>rauma narrative, <u>In</u> vivo mastery of trauma reminders, <u>C</u>onjoint child-parent sessions, and <u>E</u>nhancing future safety and development

Description of training: Presently a Master's-level mental health provider can be fully trained in TF-CBT by reading the published manual, *Treating Trauma and Traumatic Grief in Children and Adolescents* (J. Cohen, et al., 2006), completing the free web-based modules available at: http://tfcbt.musc.edu, attending a 2-day TF-CBT training with a nationally-recognized trainer, and participating in 12 hour-long phone consultations (typically over 6-12 months) with a national trainer. Nationally, TF-CBT developers and their colleagues have been active members of the National Child Traumatic Stress Network (NCTSN; www.nctsn.org) and have been involved in past and current NCTSN TF-CBT Learning Collaboratives (LCs).

Evidence base: There is robust empirical support for the efficacy of TF-CBT. There have been several randomized controlled trials (RTCs) with a total of over 500 participants demonstrating TF-CBT to be a more effective intervention than wait-list control, treatment as usual, nondirective therapy, and child-centered therapy (J. Cohen, 2010). A reduction in trauma symptoms as well as in affective and behavioral problems is reported in the literature. There are also positive effects for parents involved in these trials. RTCs have included children ages 3 to 17.

Relevance to Iowa: In 2006-2007, 56 mental health therapists from 9 sites in Iowa were fully trained in TF-CBT. Additional therapists in Iowa have been involved in TF-CBT training since the 2006-2007 initiative.

Preschool TF-CBT

Kelly Pelzel

Though efficacy of TF-CBT components have been demonstrated for sexually-abused preschool children ages 3-6 (J. Cohen, 2010; J. Cohen & Mannarino, 1996; J. Cohen & Mannarino, 1997; Deblinger, Stauffer, & Steer, 2001) , many have raised the question of whether a cognitive-behavioral treatment that is more developmentally sensitive to the abilities of young children is needed. Michael Scheeringa, Lisa Amaya-Jackson, and Judith Cohen developed a 12-session manualized preschool TF-CBT

treatment, which has recently demonstrated favorable results in its first published RTC (Scheeringa, Weems, Cohen, Amaya-Jackson, & Guthrie, 2010). Their manual, along with information on how to obtain training in this modified TF-CBT intervention, is available on Tulane University's Infant Institute website (www.infantinstitute.org).

Parent-Child Interaction Therapy (PCIT)
Beth Troutman

Evidence base: In an open trial of 133 parent-child dyads with children aged 2 (Sternberg, Baradaran, Abbott, Lamb, & Guterman, 2006) through 8 who had a history of physical abuse, neglect, exposure to intimate partner violence, and/or prenatal exposure to drugs, participation in PCIT was associated with significant decreases in the child's disruptive behavior, anxiety, depression, and post-traumatic symptoms (Urquiza, 2010).

Exposure to Domestic Violence
Beth Troutman

Children who are exposed to domestic violence are at increased risk for disruptive behavior (e.g. aggression, noncompliance, and destructive behavior), depression, and post-traumatic stress symptoms (Lieberman, Van Horn, & Ippen, 2005; Sternberg, et al., 2006; Wolfe, Crooks, Lee, McIntyre-Smith, & Jaffe, 2003) . In households where domestic violence occurs, more than half of the children have observed the violence and nearly a quarter were physically involved in episodes of violence (Edelson, Mbilinyi, Beeman, & Hagemeister, 2003). The more severe the violence, the more likely the child will be physically involved. Children who do not receive intervention carry the psychological effects of exposure into adolescence and adulthood, exhibiting increased rates of conduct problems as adolescents (Carlson, 1990) and violent behavior as adults (Sugarman & Hotaling, 1989).

Child Parent Psychotherapy (CPP)
Tracy Moran and Beth Troutman

Evidence base: In a randomized controlled trial of 75 young children exposed to domestic violence, children receiving CPP showed a decrease in behavior problems and

post-traumatic stress symptoms compared to the control group receiving community treatment as usual plus case management (Lieberman, et al., 2005). Mothers participating in CPP also exhibited a decrease in post-traumatic stress symptoms. In a follow-up study, the reductions in child behavior problems were maintained 6 months later (Lieberman, Ippen, & Van Horn, 2006). Furthermore, mothers who had participated in CPP exhibited fewer psychiatric symptoms than mothers in the control group although the majority of mothers in the control group had received individual psychotherapy.

Parent-Child Interaction Therapy (PCIT)
Beth Troutman

Evidence base: In an open trial of 62 children aged 2 to 7 exposed to domestic violence, children participating in PCIT exhibited significant decreases in disruptive behavior, anxiety, and depression (S. Timmer, Ware, Urquiza, & Zebell, 2010). Mothers participating in PCIT exhibited significant improvement in overall psychological functioning.

Maltreatment
Beth Troutman

Young children who are maltreated by their caregivers (i.e. neglected, sexually abused, or physically abused) are at significantly increased risk for exhibiting insecure and disorganized attachment relationships with their caregivers (van Ijzendoorn, et al., 1999). Maltreatment by caregivers is also associated with increased risk for disruptive behavior, post-traumatic stress disorder, anxiety, depression, academic underachievement, and school drop-out (Salzinger, Feldman, Hammer, & Rosario, 1993; Shonk & Cicchetti, 2001; Toth, Cicchetti, Macfie, Rogosch, & Maughan, 2000). Parents who were maltreated as children are at increased risk for maltreating their children, contributing to an intergenerational cycle of abuse and neglect (Egeland, Jacobvitz, & Sroufe, 1988) .

Court Teams for Maltreated Infants and Toddlers
Kelly Pelzel

ZERO TO THREE's Court Teams for Maltreated Infants and Toddlers ("Court Teams") is a national multi-site project in which family court Judges partner with child welfare professionals, healthcare professionals, and other community partners with expertise in infant and toddler mental health and development. Court Teams provide coordinated, developmentally-appropriate, and evidence-based services to abused and neglected infants and toddlers. Under the leadership of the Honorable Constance Cohen, Iowa's Fifth District Court in Polk County became the second Court Team site in April 2006. There have been 11 sites to date and the Polk County site has received continuous funding since its inception. Court Teams was modeled after the Miami-Dade County Juvenile Court initiatives led by the Honorable Cindy Lederman and Dr. Joy Osofsky, who is a psychologist and one of the foremost infant mental health experts. Similar to the National Council of Juvenile and Family Court Judges (NCJFCJ) Model Courts Project, Court Teams Judges use nationally recognized best practices to inform their decision-making regarding very young children and their caregivers.

Court Teams have two major goals: (1) increase awareness of the effects of maltreatment in very early childhood and (2) improve local systems to decrease the chance of further maltreatment. Core components of the project include: judicial leadership, local community coordination (provided locally by project coordinator Ms. Judy Norris), an active court team consisting of community stakeholders who are able to identify gaps in systems of care and suggest improvements, a focus on children ages 0-36 months removed from the care of their parents, developmentally-sensitive placement and concurrent planning, monthly family team meetings, comprehensive child-focused services, a developmentally-sensitive visitation schedule, access to appropriate mental health services, technical assistance and training provided by ZERO TO THREE, and evaluation of project outcomes.

A recent independent evaluation of the Court Teams across the nation suggests it is a promising approach (Hafford, McDonnell, Kass, DeSantis, & Dong, 2009). Among 186 children studied, 99% did not experience further maltreatment while participating in Court Teams, 95% achieved permanency, and 97% received services for identified needs (e.g., medical care, developmental screenings, and early intervention). Polk County's Court Team has had success in providing specialized training to stakeholders, promoting evidence-based infant mental health services (e.g., Child Parent

Psychotherapy; CPP) and early intervention (e.g., Early ACCESS services), and disseminating the model and practices to other family court Judges in Iowa. By providing strong support to families throughout the removal process and front-loading services, permanency has also been expedited. In 2010 the Polk County Court Team reported that only 17% of Court Termination of Parents' Rights (TRP) cases were appealed as compared to 55% of cases overall, allowing the adoptions of young children to be finalized quickly when parents could not safely reunify (C. Cohen, 2010). Further, compared to a representative control group, the children served by four Court Teams (including the Polk County team) reached permanency 2-3 times faster on average regardless of type of exit (e.g. reunification, adoption, kinship, custodianship). Notably, children involved in Court Teams were out of the foster care system one year earlier on average than the control group children (McCombs, 2011). Further comparison of Polk County Court Team outcomes to other three Court Team outcomes in McCombs study will be available via webinar on September 12, 2011.

Child Parent Psychotherapy (CPP)
Tracy Moran and Beth Troutman

Evidence base: In a randomized controlled trial of 87 maltreated 4-year-olds, those who received CPP exhibited a greater decline in negative self-representations than those in the control groups (Toth, Maughan, Manly, & Spagnola, 2002). In a randomized controlled trial of 137 maltreated 1-year-olds and their biological mothers, dyads receiving CPP were more likely to be securely attached than the control group and as likely to be securely attached as those receiving a home-based psychoeducational intervention (Cicchetti, Rogosch, & Toth, 2006).

University of Quebec Home-Visiting Attachment-Based Intervention
Beth Troutman

Description of intervention: This brief home-visiting intervention focuses on improving maternal sensitivity to attachment signals in children between the ages of 1 and 6 who have been sexually abused, physically abused, or neglected by a family

member (Moss, Dubois-Comtois, Cyr, St-Laurent, & Bernier, 2011). The intervention involves 8 home visits. Each home visit lasts approximately 90 minutes and involves: 20 minutes where the parent has the opportunity to discuss problematic parent-child interactions, 10 to 15 minutes where the provider videotapes the parent and child interacting during an activity chosen by the provider to address specific problems in the parent-child relationship, 20 minutes of video feedback where the provider plays back the just-completed videotaped sequence focusing on positive sequences and reinforcing parental sensitive behavior toward the child, and 10 to 15 minutes where the parent's progress is highlighted and the parent is encouraged to continue similar activities with the child during the coming week.

Description of training: The intervention is delivered by providers with either bachelor's or Master's degrees in Psychology and experience in child welfare settings. Training involves readings on attachment theory, identifying functional and dysfunctional attachment patterns in videotaped segments of child-parent interactions, and weekly supervision with treatment developers.

Evidence base: In a randomized controlled trial of 67 French-Canadian parent-child dyads being monitored by the child welfare system following a confirmed report of child maltreatment, dyads receiving the attachment-based intervention were significantly more likely to be securely attached than the control group receiving the standard agency services of a monthly visit by a child welfare worker. At the posttest evaluation, 66% of the intervention group was securely attached compared to 28% of the control group. The rate of disorganized attachment at posttest was significantly lower in the intervention group than the control group (20% vs. 56%).

Parent-Child Interaction Therapy (PCIT)
Beth Troutman

Evidence base: There are three randomized controlled trials of the efficacy of PCIT in young children who have experienced maltreatment (M. Chaffin, Funderburk, Bard, Valle, & Gurwitch, 2010; M. e. a. Chaffin, 2004; Thomas & Zimmer-Gembeck, 2011). In a study of children who had been physically abused, 110 parents with a new confirmed physical abuse report for a child 4 to 12 years of age were randomly assigned

to PCIT, PCIT plus individualized enhanced services, or a standard community-based parenting group (M. e. a. Chaffin, 2004). Parents had an average of two prior reports to child welfare for physical abuse and two prior reports to child welfare for neglect. One-third of the parents met criteria for lifetime-prevalence substance abuse and one-third met criteria for probable antisocial personality disorder (based on self-report). Parent report of child disruptive behavior, anxiety, and depression did not differ between the three groups. Parents assigned to PCIT or PCIT plus enhanced services exhibited significant declines in negative parent-child interactions while parents assigned to the community group showed no change from baseline. At a median follow-up of 850 days, 19% of parents assigned to PCIT had a re-report for physical abuse compared with 49% of parents assigned to the standard community parenting group. Additional enhanced services did not improve the efficacy of PCIT.

The efficacy of PCIT with parents who had neglected or physically abused their child was examined in a randomized controlled trial of 192 parents with an average of 6 prior maltreatment reports where 76% of the parents had a child (aged 2 through 12) in foster care at the time the study began (M. Chaffin, et al., 2010). Parent-child dyads receiving PCIT were more likely to be returned home and were returned home sooner than those assigned to treatment as usual. After statistically controlling for differences in reunification rates between the groups, PCIT was found to reduce re-reports for abuse (over a median follow-up of 904 days) (M. Chaffin, et al., 2010).

In a study conducted in Australia, 150 mothers who had a history of maltreating their children or were considered at high risk for maltreating their children were randomly assigned to PCIT or a wait-list control group. Parent-child interactions improved significantly in dyads receiving PCIT compared to the control group. Mothers who participated in PCIT exhibited significant declines in parenting stress and children exhibited significant declines in disruptive behavior compared to the control group. Families who completed PCIT were significantly less likely to be referred to child protection for suspected maltreatment (17% vs. 43%).

Foster Care
Beth Troutman

Children younger than 5 are twice as likely to be placed in foster care and spend longer in care than older children (Goerge & Wulczyn, 1998). Removal from caregivers and placement in foster care is usually precipitated by maltreatment and concerns regarding the child's safety. In addition to the trauma prior to placement in foster care, separation from a primary caregiver is distressing for infants and young children, even if the caregiver physically abused them or failed to provide adequate care. Once they enter the foster care system, young children often experience additional changes in caregivers undermining their potential to form a secure attachment with a primary caregiver and healthy emotional development. The more placements young children experience after entering foster care the more likely they are to exhibit oppositional behavior, crying, and clinging (Gean, Gillmore, & Dowler, 1985; Lewis, Dozier, Ackerman, & Sepulveda-Kozakowski, 2007). Placement instability after entering the foster care system has been associated with problems with emotion regulation and self-control (Fisher, Gunnar, Dozier, Bruce, & Pears, 2006; Lewis, et al., 2007). These behavioral and emotional difficulties can lead to further disruptions in care as children's behavioral and emotional difficulties are one of the major reasons for disruption of a foster care placement (Oosterman, Schuengel, Slot, Bullens, & Doreleijers, 2007). Repeated disruptions in caregivers can lead to Reactive Attachment Disorder of Infant or Early Childhood, a psychiatric disorder in which the child exhibits severe disturbances in relationships with caregivers (American Psychiatric Association, 1994).

Disruptions in attachment relationships also affect the child's physiological functioning. Young children who experience disruptions in caregiving exhibit alterations in hypothalamic-adrenal-pituitary (HPA) axis activity (as assessed by diurnal patterns of salivary cortisol activity), the physiological system that is associated with response to stress, sleep, and ability to fight off infections (Fisher, Stoolmiller, Gunnar, & Burraston, 2007). The more neglect and disruptions in foster care placements they experience, the greater the likelihood they will exhibit these alterations. These alterations in HPA axis activity are associated with sleep difficulties, the child's ability to cope with subsequent stressors, and the child's vulnerability to illness.

When young children are placed in foster care, the Adoption and Safe Families Act (ASFA) requires states to provide services that enhance parents' capacity to provide for their children's needs. However, relatively few of the Iowa parents who have their children placed in foster care or the foster parents who care for them receive evidence-based interventions that improve their capacity to meet the child's social-emotional needs.

Attachment and Biobehavioral Catch-up (ABC)
Beth Troutman

Description of intervention: This intervention consists of 10 weekly 1-hour home visits addressing the tendency of young children in foster care to appear rejecting of care, how the foster parent's history may interfere with providing nurturing care, and how to support the development of self-regulation in young foster children by providing a predictable interpersonal environment (Dozier, Higley, Albus, & Nutter, 2002). These themes are addressed through the use of specific activities (e.g. teaching the foster parent to use child-led play) and discussion of videotaped interactions.

Evidence base: In a randomized controlled of 86 children placed in foster care between birth and 18 months of age, children receiving the ABC intervention were more likely to be securely attached to the foster mother (Dozier, Peloso, Zirkel, & Lindheim, 2007). In a subsequent study of 60 children between 3 months and 3 years of age, children in the ABC intervention group exhibited more normal patterns of cortisol production than the control group, an indication of healthier HPA axis functioning (Dozier, Peloso, Lewis, Laurenceau, & Levine, 2008).

Description of training: The intervention is provided by mental health providers with a minimum of a Master's degree. The developer of the intervention, Dr. Mary Dozier, and her colleagues from the University of Delaware provide training in ABC. The initial training is a week. This is followed by weekly group supervision through video-conferencing for a year. Three full sets of videos (10 sessions each) are submitted for certification and must meet criteria for effectiveness and fidelity. Information about training is available at: http://abcintervention.com/training.html.

Multidimensional Treatment Foster Care for Preschoolers (MTFC-P)

Beth Troutman

Description of intervention: MTFC-P is comprehensive intervention specifically designed for children aged 3 to 5 in foster care. The intervention is delivered via a team approach to the child, foster parents, biological parents, and, if the child is not reunified with parents, adoptive parent. Foster parents are taught specific skills to maintain a warm, positive approach to managing the child's behavior. These skills are reinforced through daily telephone calls, weekly foster parent group meetings, and 24-hour access to on-call staff. MTFC-P also provides individual treatment to address the child's behavior in preschool or day care, provides therapeutic playgroup sessions to facilitate school readiness, and teaches skills to the child's biological parents or adoptive parents to provide the same type of warm, positive approach to managing the child's behavior provided by the foster parents if the child is moved to a new placement (Fisher, et al., 2007).

Evidence base: In a randomized trial of 117 3- to 5-year-old children entering new foster placements, MTFC-P was been found to significantly reduce disruptive behavior, decrease disruptions in foster care placements, and improve HPA axis functioning compared to the regular foster care control group (Fisher, et al., 2007). In a 2-year follow-up study of the intervention, MTFC-P was found to increase successful permanency attempts for children with histories of foster placement instability (Fisher, Kim, & Pears, 2009). Specifically, for children who had been placed in 4 or more different foster homes prior to study entry, the rate of successful permanency attempts (i.e. reunification or adoptive placements with no subsequent placement changes) was significantly greater in the MTFC-P group than in the control group (83% vs. 39%). Maltreatment experiences prior to entry into foster care were not associated with successful permanency attempts.

Information on training: Training in MTFC-P is available through TFC Consultants, Inc. http://www.mtfc.com/implementation.html.

Parent-Child Interaction Therapy (PCIT)
Beth Troutman

In an open trial of PCIT in 75 foster parent-child dyads with children aged 2 through 8 (66% were less than 5 years of age), participation in PCIT was associated with significant decreases in disruptive behavior, anxiety, and depression in the children and significant decreases in parenting stress in the foster parents (S Timmer, Urquiza, & Zebell, 2006).

Training and implementation in Iowa: PCIT for young children in foster care and their caregivers (i.e. biological parents and/or foster parents) is currently available in several parts of Iowa. This has resulted from the advocacy of individuals in the judicial system, Iowa Department of Human Services, public and private agencies serving families in the child welfare system, and mental health care providers serving families in the child welfare system. Access continues to be an issue in many areas of Iowa due to waiting lists and lack of providers but progress has been made in providing this evidence-based intervention to young children in foster care over the past four years.

Training and supervision in early childhood mental health
Tracy Moran and Beth Troutman

Training and supervision in early childhood work may be: administrative, educational and/or reflective in nature, each with different foci and related goals. In administrative supervision, agency policies are discussed, work responsibilities are clarified and work practices/methods are reviewed. Administrative supervision provides a context within which to discuss supervisee strengths and weaknesses, work load, and distribution of responsibilities.

The goal of educational supervision is to guide the supervisee through the learning process associated with the work. The supervisor and supervisee will establish learning goals that ideally fulfill the goals of the agency as well as meet the needs of the worker in becoming more knowledgeable and skilled in their work. Educational supervision may entail supervisor modeling of skills, provision of knowledge through experience and/or readings on given topics of interest to the work.

A particular type of educational supervision involves training and supervision in a specific evidence-based practice. As evidence-based interventions have been implemented outside of research settings, researchers have begun to examine the type of therapist training associated with positive outcomes (e.g. mastery of evidence-based intervention and delivering intervention with fidelity). Five studies examining outcomes associated with having providers read treatment manuals indicated that reading alone resulted in increased knowledge about the intervention but did not result in changes in skills or treatment mastery (Herschell, 2010). Therefore, although reading treatment materials is a necessary first step to learning an intervention, it is not enough to change practice. Seven studies have examined approaches where the provider interacted with training materials (e.g. online training or videotape review). Providers rated these learning experiences positively but they were only slightly more effective than reading written materials at increasing knowledge, skills, and treatment mastery (Herschell, 2010). Nineteen studies of workshop training formats indicated that attending workshops in interventions results in increased knowledge and, in some studies, leads to initial improvements in therapist skill in the intervention (Herschell, 2010). However, without supplemental training (e.g. observation, feedback, consultation, and coaching), skills decreased post training (Herschell, 2010). Thirty-one studies on supplements to workshop training indicated that training techniques that involve observation and feedback, role-playing, and case consultation generally resulted in increased knowledge, skills, and treatment mastery with the strongest evidence for multi-component treatment packages involving treatment manual, multiple days of intensive workshop training, expert consultation, review of intervention sessions, and completion of one or more cases with consultation (Herschell, 2010). There is relatively little research to support outcomes associated with training a select group of staff who then train other staff (i.e. "train the trainer") (Herschell, 2010).

Reflective supervision differs from administrative and educational formats in that it emphasizes the importance of socioemotional development in both the child and the childcare provider (Gilkerson, 2004).The focus of reflective supervision is fostering a collaborative rapport between supervisor and supervisee such that the supervisee can feel comfortable in fostering an awareness of how their background, thoughts, feelings

and prior experiences influence their work with children and families. Ideally, "Through reflection, non-clinicians develop their capacity to understand the interpersonal world and learn to take multiple perspectives" (Gilkerson, 2004). Reflective supervision was founded on the notion that by providing professionals with the opportunity to reflect on their interactions with children and families, professionals enhance their understanding of their own emotional experiences as well as their sensitivity to the emotional experiences of the child/family (Fenichel, 1992; Gilkerson, 2004). Reflective supervision provides a context within which the supervisor supports the supervisee and via parallel processes, the supervisee is better able to support colleagues and families and who are then better equipped to support the children in their care. The theoretical backbone of reflective supervision is the belief that once a professional is able to openly and nondefensively view experiences through a child or family's perspective, professionals are more adept at reading children's cues and evaluating their reactions to working with children and families (Ainsworth, Blehar, Waters, & Wall, 1978; Koren-Karie, Oppenheim, Dolev, Sher, & Etzion-Carasso, 2002).

Reflective supervision is an integral component of training and delivery of a number of the evidence-based early childhood prevention and intervention programs highlighted within this paper (e.g., Child Parent Psychotherapy (CPP), Nurse Family Partnership (NFP), Parents as Teachers (PAT), and Healthy Families America (HFA). However, it is important to note there are other evidence-based early childhood mental health programs highlighted in this review where reflective supervision is not a component of the training (e.g. Parent-Child Interaction Therapy (PCIT), Applied Behavior Analysis (ABA), Trauma-Focused Cognitive Behavioral Therapy (TF-CBT)).

Guidelines for training and supervision of early childhood mental health providers in other states have varied in their supervision requirements. The Michigan Infant Mental Health guidelines consider reflective supervision a "best practice" and early childhood mental health providers are required to have reflective supervision as part of their training. However, guidelines developed by other states (e.g. California and Florida) do not require reflective supervision.

In conclusion, research on early childhood mental health interventions suggests case-based supervision (i.e. supervision on applying infant mental health interventions with specific children and families) is a component of successful implementation of most evidence-based early childhood mental health interventions. However, the extent to which the supervision emphasizes the early interventionist's own feelings and early history (i.e. reflective supervision components) varies between specific evidence-based practices.

Part II: Recommendations for Professional Development

On September 7, 2011, a retreat regarding professional development in early childhood mental health was held in Des Moines, Iowa. 85 leaders in Iowa's infant and early childhood mental health system were registered for the meeting. Attendees represented a variety of different perspectives and included mental health providers, judges, educators, parents, legislators, and administrators. The agenda for the meeting is listed below:

Iowa Early Childhood Mental Health Retreat Agenda
Des Moines Botanical Center
September 7th, 2011

8:00 to 8:30	Registration, networking, and light breakfast
8:30 – 8:45	How we got here and what we hope to accomplish Chris Rubino/Rhonda Boltz
8:45 – 9:00	Video presentation of early childhood mental health services in Iowa Dr. Beth Troutman
9:00 – 10:30	Early Childhood Mental Health Overview Dr. Neil Boris
10:30 – 10:45	Break (soda and water provided)
10:45 – 11:30	Group activity one: needs and supports

Facilitator: Dr. Neil Boris

11:30 – 12:15 Lunch (provided)

12:15 – 1:00 Discussion on group activity one
       Facilitator: Dr. Neil Boris

1:00 – 1:15 Illinois Association for Infant Mental Health Overview
       Dr. Tracy Moran

1:15 – 1:30 Developing an Infant Mental Health Association in Utah
       Dr. Kelly Pelzel

1:30 – 2:00 Early Childhood Mental Health Associations around the Country
       Dr. Neil Boris

2:00 – 2:15 Break (light snack provided)

2:15 – 3:00 Group activity two: How connected are we?
       Facilitator: Dr. Neil Boris

3:00 – 3:30 Next Steps
       Facilitator: Gretchen Hageman & Sonni Vierling

Following the retreat, an evaluation was sent to all registered participants seeking feedback about the retreat and next steps. 38 individuals responded to the evaluation.

As indicated by this review and the participation at the retreat, there are a number of Iowans who are currently involved in the infant and early childhood mental health system and are motivated to improve professional development in this area. However, given their experience, they are also cognizant of the significant barriers to improving professional development.

Barriers to improving professional development in infant and early childhood mental health are briefly reviewed followed by specific recommendations for moving forward. Barriers and recommendations are based on discussions in the early childhood mental health workgroup, discussions and group activities during the retreat, and responses to the evaluation.

Barriers to Improving Professional Development in Infant and Early Childhood Mental Health

The barrier mentioned most often was lack of resources (time and money). Another barrier mentioned frequently was the lack of coordination between different efforts. A related barrier was fragmentation of the current children's mental health system. Other barriers mentioned included lack of awareness of early childhood mental health and lack of agreement on the definition of central concepts such as "early childhood mental health" and "evidence-based interventions".

Recommendation I: Form Iowa Association for Infant and Early Childhood Mental Health

There was a strong consensus that an initial first step to improving professional development for infant and early childhood mental health providers in Iowa was to form an infant and early childhood mental health association. Several respondents to the post-retreat evaluation listed establishing an Iowa Infant and Early Childhood Mental Health Association as the most important next step and 95% of respondents answered yes to "Do you feel there would be value in establishing an Infant and Early Childhood Mental Health Association in Iowa".

Recommendation II: Develop a Clearinghouse of Information Regarding Infant and Early Childhood Mental Health Interventions in Iowa

The need for individuals to have easy access to information about 1) evidence-based infant and early childhood mental health interventions and 2) how to access effective early childhood mental health interventions was a frequent theme. This white paper is an initial step towards summarizing current research on evidence-based infant and early childhood mental health interventions and their availability in Iowa.

Additional steps to develop a clearinghouse include: 1) making white paper available to a wider audience (e.g. by posting on a web site), 2) updating the information on a regular basis to ensure it remains up-to-date with current research and training efforts in Iowa, and 3) adding information about how to access providers delivering evidence-based early childhood mental health interventions.

Recommendation III: Increase Training in Evidence-Based Practices that Promote, Prevent, and Treat Mental Health Problems in Infants and Young Children

Over the past several years, Iowa's educational system, home-visiting system, and mental health system has invested a significant amount of time and effort in training providers in evidence-based practices. However, there continue to be significant gaps in access to evidence-based interventions. Some evidence-based interventions are only available in one or two areas of the state (e.g. CPP and NFP). Other evidence-based interventions have been more widely disseminated (e.g. PCIT) but are still not available in large portions of the state. Numerous early childhood mental health interventions that have been supported by research are not currently available in Iowa (e.g. Early Start Denver Model, MTFC-P).

Recommendation IV: Increase Access to Clinical Supervision for Infant and Early Childhood Providers

Research on provider training in evidence-based interventions provides strong support for the contention that supervision is necessary in order to implement evidence-based interventions with fidelity. In addition, many leaders in infant mental health believe reflective supervision is a core component of training for infant and early childhood providers. Although there is not currently consensus in the early childhood mental health field on the necessity of reflective supervision, there is strong support for infant and early childhood providers to have increased access to clinical supervision.

Recommendation V: Determine Method for Recognizing Expertise in Infant and Early Childhood Mental Health

Providing infant and early childhood mental health services requires specialized training and skills. There is currently no method for recognizing this specialized expertise in Iowa. As the number of individuals with specialized training in promoting, preventing, and/or treating infant and early childhood mental health problems

increases, it will be important to recognize the expertise of individuals who have completed training in infant and early childhood mental health. Possible options for recognizing this expertise and determining competency to provide early childhood mental health interventions are briefly discussed below.

Option 1: Purchase Michigan Association for Infant Mental Health Competency Guidelines and Endorsement Process for implementation in Iowa. The Michigan Association for Infant Mental Health has developed a set of competencies that have been used by Michigan for several years to determine competency to deliver infant mental health services (defined as services to children 0 to 3). In the past few years, several other states have begun using these guidelines. The majority of the states using them have expanded the age range they cover to age 5. The advantage of implementing these competencies in Iowa is they have already been developed and used by other states. The disadvantage is the competencies were developed 15 years ago, before there were a significant number of evidence-based interventions for infants and young children. Thus, training in evidence-based interventions is not a criterion for competency according to the Michigan guidelines. Another disadvantage is providers are required to document a substantial number of hours of reflective supervision in order to meet competency criteria. Since a number of providers have not previously had access to reflective supervision, it will be important to build this capacity in Iowa before making it a required component of competency in early childhood mental health (see recommendation IV).

Option 2: Use certification systems for specific infant and early childhood interventions. Some early childhood mental health interventions have developed processes for becoming certified in the intervention or are in the process of developing certification processes. If this option were adopted, there would still need to be some system for reviewing the supporting evidence for the specific interventions since there are a number of early childhood mental health interventions with certification processes that are not supported by empirical research.

Option 3: Develop infant and early childhood mental health competencies for Iowa. A number of states (e.g. Illinois, Florida) have developed their own state

guidelines to determine competency in early childhood mental health. For example, since Iowa has already committed resources to training providers in some of the evidence-based early childhood mental health interventions, the development of state-specific guidelines could recognize training in evidence-based interventions as one of the requirements for specialization. A major disadvantage to developing competencies specific to Iowa is the amount of time and resources needed to develop state-specific competencies.

Option 4: Integrate competencies into current credentialing systems. Instead of developing a separate credentialing system for early childhood mental health, infant and early childhood mental health competencies could be integrated into the current credentialing system. For example, Louisiana has integrated competency in infant and early childhood mental health into their child care rating system. Iowa has a process in place for credentialing Iowa family support programs that could be expanded to include competency in infant and early childhood mental health for family support programs that make that a focus of their program. Mental health providers who work with infants and young children are credentialed through the Iowa Department of Public Health. Infant and early childhood mental health specialists could work with their licensing boards to define competency in early childhood mental health. The advantage of this approach is it utilizes existing systems reducing the resources needed to implement. The disadvantage is it continues the fragmentation in the current mental health system.

Recommendation VI: Explore Opportunities to Form University-State Partnerships to Promote Provider Training

University-State partnerships provide important opportunities to promote provider training and have contributed to the effective dissemination of evidence-based interventions in Iowa (e.g. Iowa State's CSEFEL coaching project, University of Iowa's dissemination of PCIT, University of Iowa's use of telehealth to deliver ABA). However, Iowa currently has no organized training program focused on training in infant and early childhood mental health such as those available in other states (e.g. Tulane

University's Institute of Infant and Early Childhood Mental Health, Erikson Institute's Irving B. Harris Infant Mental Health Certificate Program). It is recommended that Iowa's universities continue to partner with the state on individual projects while exploring opportunities to develop an organized training program in infant and early childhood mental health.

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