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ADDRESSING SOCIAL-EMOTIONAL DEVELOPMENT AND INFANT MENTAL HEALTH IN EARLY CHILDHOOD SYSTEMS

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This series of reports is designed to support the planning and implementation of the Maternal and Child Health Bureau (MCHB) State Early Childhood Comprehensive Services (SECCS) initiative. The reports are written by a team of experts to provide guidance on state policy development within this initiative. The policy reports on cross cutting themes include strategic planning, communications strategies, financing, results-based accountability, cultural proficiency, and data analysis and use. The policy reports on programmatic topics include medical home, parenting education, family support, infant mental health, and dental health.

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Introduction

The science of early development and our understanding of the impact of early experience on later social, emotional, and cognitive development has grown dramatically in the past three decades. Because the data are compelling and far-reaching, there has been increasing interest and concern about the quality of the infant's earliest experiences, and how those experiences shape the child's later development. The current state of knowledge should impact how every system that works with infants and families needs to contemplate and address the needs of our youngest citizens and their families (Shonkoff & Philips, 2000).

In this report, we present an overview of infant mental health (IMH) and the principles that need to be considered when building systems to meet the social and emotional needs of young children. Because there are varying levels of needs for IMH services, as well as multiple ways in which children and families may access IMH services, and different pathways into the IMH service system, we describe a continuum of service delivery approaches that states can consider as they begin to develop and improve the performance of an infant mental health service system. Because IMH is a relatively new field of service delivery, evidenced-based guidelines about the most effective service delivery approaches are not always available, nor are there simple outcome measures. Thus, we present a number of suggestions about the organization and delivery of IMH services at the state level, as well as some of the problems that are likely to be encountered. Given the scarcity of trained IMH service providers we address training and workforce development. Because improving the delivery of IMH services requires better, evidence-based data, we also suggest outcome and evaluation needs. Finally, we address policy recommendations and strategies to achieve them.

Overview: What is Infant Mental Health?

IMH has been defined as *the developing capacity of the child from birth to three to: experience, regulate, and express emotions; form close interpersonal relationships; and explore the environment and learn–all in the context of family, community, and cultural expectations for young children. Infant mental health is synonymous with healthy social and emotional development* (Zero to Three Infant Mental Health Task Force Steering Committee, 2001). This definition incorporates a broad range of factors that impact current and later functioning and development.

To facilitate our discussion of infant mental health, we would like to define some key terms and highlight some important differences in terminology. First, in IMH, *infancy* is considered the first three years of life. For many, especially in American culture, "infancy" is considered to be the first year of life, so IMH requires a broadening of that view. The term *developing capacity* refers to the enormity and rapidity of growth and development during the first three years of life. Finally, when referring to an *intergenerational approach* we respond to the recognition that an exclusive focus on the first three years begins too late and ends too early (Shonkoff & Phillips, 2000), and implies the need to address the needs of the parent and child. As we will show, this approach is particularly important to infant mental health.

In this report, we refer to infant “mental health” despite discomfort in some sectors with this term. This discomfort may come from several sources: a negative association of "*mental health*" with major mental illness, the belief that early childhood is essentially a happy time makes it difficult to imagine that infants can have mental health problems, as well as general and cultural biases about mental health (Knitzer, 2001; Zeanah, 2000). The term infant “well-being” has been offered as a more positive substitute. Defined as "the state of being well, happy, or prosperous," (Guralnek, 1982), it is certainly a *goal* that all of us share for our youngest citizens. Unfortunately, “well-being” does not capture the actual experience for many at risk children, nor is it helpful in guiding us in how to maximize early experience.

The Surgeon General's Report of Children’s Mental Health (2000) makes an important distinction between *mental health* and *mental illness*. Mental health is defined as the "successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt and to change and to cope with adversity; mental health is indispensable to personal well-being, family and interpersonal relationships, and contribution to the community or society" (USDHHS, 1999). This version of mental health is similar to the above definition of infant mental health. Mental illness, on the other hand, refers to diagnosable conditions. At first it may seem hard to entertain the idea that infants can have a mental illness, yet there is ample clinical experience and growing data that shows that, as a result of a number of factors, infants may have diagnosable disorders in need of mental health treatment (see Zeanah, 2000).

The point here is not academic, because terminology reflects not only what is being addressed but also *what we value*. Cowen (1996) argues that any definition of wellness will reflect both overt and covert values. Since values differ across cultural and ethnic groups, it is difficult to consistently define the concept of wellness. Values are inherently interwoven into all aspects of infant mental health, from how the infant is cared for within the family to how decisions are made about funding to develop or support services for young children and their families. Personal experiences, beliefs, and attitudes, as well as family, community, ethnic and cultural, professional, and organizational values are imbedded in how each of us thinks about parenting and what young children need to grow into productive adults. As the discussion about how to develop infant mental health services commences, these values need to be recognized and included.

The take home message is that how state MCH programs and their partners communicate about infant mental health deserves considerable discussion during the planning process. We recommend that grantees and their partners adopt a communication strategy that focuses on promoting positive development through positive interactions between caregivers and children. This focus on prevention may help avoid some audience’s difficulties with the term “mental health” and the idea that infants can suffer from mental illness. Finally, we recommend that the specific communication strategy and terminology used be crafted for the community being addressed.

The Contexts of Infant Mental Health

Context refers to the interaction between the many factors that influence infants’ development. Intrinsic factors include biological, genetic, and constitutional make-up, and extrinsic factors include the infants’ environment and relationships (Sameroff & Emde, 1989; Zeanah & Zeanah,

2001). These factors are dynamic that interact with each other. When developing and administering IMH programs, all of these contexts need to be considered.

Biological Context

The biological context includes all of the intrinsic factors that affect an infant's development: genetic influences, temperament, constitution, physical health, and physical attributes. These factors are considered "within the individual;" they may or may not be modifiable. Much of primary health care is devoted to ensuring that the infant is off to a "healthy start" and addresses some of the modifiable intrinsic factors—using interventions such as nutritional education, developmental surveillance, and early intervention for various health and developmental problems. Clearly, development depends in part on the physical experience and the physical state of the body and brain.

Biological context is also important for infant mental health. For example, from the third trimester of pregnancy through the second year of life is the most rapid period of brain development in the human life cycle, though brain development begins in the first few weeks after conception and continues well into adulthood. The overall *structural development* of the brain occurs prenatally, but the *functional development* is a result of prenatal and postnatal experiences. Functional development depends on making connections between distal and local neural circuits through the formation and pruning of neuronal synapses—believed to occur in part as a result of prenatal and postnatal *experiences.* Functional development occurs at an incredibly rapid pace during the first three years of life, and is shaped by the interplay between biology and experience (Nelson & Bosquet, 2000; Shonkoff & Phillips, 2000). A number of stressful events have been shown to directly affect early brain development, for example, prenatal maternal stress has been associated with changes in infants' stress-regulation functions in the brain (Gunnar et al, 1996), and infants of depressed mothers show alterations in EEG activity, which result in measurable differences in the newborn's responses to stimuli (Nelson & Bosquet, 2000).

Physical health impacts the type of care needed by the infant, how his caregivers respond to him, and his capacity for normal physical as well as mental growth and development. The infant's temperament (often characterized as easy, slow to warm up, or difficult), as well as the infant's physical attributes (ranging from the child looking like someone in the family to disfiguring anomalies) can powerfully impact the caregiver's perceptions of and responses to the infant. For example, either physical or temperamental characteristics may result in the caregiver feeling drawn to, protective of, or disconnected from the infant. Infants' reactions to the care they are given can support positive interactions and further exacerbate negative interactions. For instance, a child whose caregiver feels disconnected may cry in an effort to solicit attention; the caregiver may feel further disconnected to the infant due to his crying.

Developmental Context

The first three or so years of life is the period of most rapid development in the life span. Normal newborns are capable of recognizing their caregiver (at a sensory level), and have basic modes of communicating with their caregiver. Over the first few months of life, they begin to discriminate caregivers, express a variety of emotions, and are increasingly able to communicate needs. By age three years, they have developed strategies for learning, and are able to engage in complex

interactions with peers, including cooperating with and showing empathy for others, and have beginning abilities to resolve conflicts.

Though there is a wide range of what is considered normal, there is also increasing understanding of how deviation or delay impact the pathway for normal development, and the implications for current and future mental health. For example, research shows that infants in the first few years of life who experience serious adversity (i.e., exposure to violence, trauma, or multiple medical procedures) are more likely to show

- abnormal patterns in the expression of emotions,
- unusual or deviant behaviors including increased motor activity,
- distractibility and inattention,
- disruptions in feeding and sleeping patterns, and/or
- developmental delays in motor and language skills (Scheeringa & Gaensbauer, 2000).

Furthermore, highly aggressive two year olds are more likely to be aggressive subsequently, as well as having impaired peer relationships and more difficulties in school (Shaw et al., 2000; Greenberg, 1999).

Environmental Context

The infant lives within a specific physical environment, and his care is influenced by familial, cultural, and ethnic influences. Because of the myriad of associated environmental and psychosocial stresses, including an increased risk of community violence and mental health issues, poverty exerts a strong negative influence on the early experience of many young children (Aber, Jones & Cohen, 2000; Evans, 2004). The physical environment is also related to the availability and utilization of external supports for families with young children. For example, rural or isolated areas, inner cities with crowded living conditions and unhealthy living spaces, and even the climate and physical terrain will impact needs of the infant and the family as well as the prioritization, type, and availability of resources.

Culture and ethnic influences affect parenting beliefs and behaviors, beliefs about infants and child care, expectations about the roles of mother, father, and extended family members, and how communication occurs among family members, including how conflict is handled. Interestingly, while various cultural and ethnic groups develop different child rearing practices, there are certain values that are held across cultures around the world (Garcia-Coll & Meyer, 1993): to ensure the child's safety and health; to ensure the child becomes capable of economic self-maintenance; to ensure the child will be able to maximize societal values. Finally, the family exerts a strong influence on the day to day experience of the infant, particularly the type and availability of support for the parent. It also influences the parents' expectations, hopes, and values regarding the infant, and in turn, how the parent cares for and experiences the infant.

Relationship Context

Despite the influence of environment, the family, and physical health, the *infant-caregiver relationship* is the most important experiential context for infant development (Shonkoff & Phillips, 2000; Zeanah & Zeanah, 2001). It is through this relationship that:

- The infant begins to understand his world, learns how to interact with others, and begins to develop a sense of his competence and self-worth;

- The infant experiences environmental risk factors, that is, the way an infant experiences poverty, maternal mental illness, and partner violence is primarily via their effects on the infant-parent relationship;
- Intrinsic risk factors, such as biological difficulties, are moderated. For example, infants with biological difficulties such as the complications from prematurity have better outcomes when their caregiving environments are supportive and more problematic outcomes when their caregiving environments are less supportive (Sameroff & Fiese, 2000). Difficult temperaments can be moderated through a responsive, nurturing, and consistent caregiving experience (van den Boom, 1994);
- The quality of the infant-caregiver relationship is a risk or protective factor for infants' later development. Infants who develop a "secure" attachment relationship with the primary caregiver during the first year of life are more likely to have positive relationships with peers, to be liked by their teachers, to perform better in school, and to be more resilient in the face of stress or adversity as preschoolers and later. Infants who develop an insecure attachment relationship are at risk for a more troublesome trajectory; factors associated with insecure relationships include maternal mental health problems, including depression, substance abuse, family violence, and unresolved grief. Because of the strength of influence of the infant-caregiver relationship, any factors that impact the infant-caregiver relationship play a determining role in the emotional functioning of the young child (Zeanah et al., 2000).

The "attachment relationship" is a term developed from Bowlby's (1969) theory in which he defined attachment as a biologically-based process that motivates the young child to seek comfort, support, nurturance, and protection from discriminated attachment figures–providing the basis for psychological security. The attachment relationship develops over the course of the first year of life through the myriad of daily interactions between the infant and the primary caregiver(s). A warm, nurturing, responsive, and consistent pattern of interactions between the infant and caregiver leads to a "secure" attachment; through these interactions, the infant learns that he is worthy of being taken care of, that he can count on his caregiver to be there when he needs her, and he develops a sense of self-competence in that his actions (i.e., signals, cues, behaviors, communications) can be understood and are effective in getting his needs met. Conversely, interactions that lack these qualities and are inconsistent, unpredictable, harsh, or punitive lead to insecure or disorganized attachments. These patterns of interaction develop over time and in step with other developmental achievements, including motor and cognitive abilities. While the parent may feel great love and "bonding" with the newborn, it is not until the last half of the first year of life that the child is able to clearly show a preference for his attachment figure as his "go to" person in times of stress. During these early months, the infant begins to develop a working model of what it is like to be with someone in a close relationship. Usually, a hierarchy of preferred caregivers can be identified. Furthermore, it is possible for the child to have more than one type of attachment relationship with his caregivers, that is, attachment is *relationship-specific.*

This means that the quality of attachment lies within the relationship and not the individual—an important consideration for assessment and treatment. The child may have a secure attachment relationship with one caregiver and an insecure relationship with another caregiver (Zeanah, Mammen, & Lieberman, 1993). It is important to emphasize that the attachment relationship is about more than simply warm feelings, and it depends on more than just the provision of physical

care. This relationship encompasses not only behaviors, but also the feelings and expectations that are associated with being with that person. Infant mental health, therefore, has a strong relationship focus. This focus makes it different from other disciplines that typically focus on the child or the parent. As noted, the relationship is the focus of assessment and interventions, though the biological, environmental, and family contexts must be considered as they impact the relationship.

The focus on relationships in IMH is not limited to the parent-infant relationship, but includes positive working relationships between caregivers and service providers. This is due to the fact that concerns regarding IMH are likely to be sensitive issues for parents. As a result, the success of any early childhood intervention will depend in part on the quality of the provider-caregiver relationship (Stadtler, O'Brien, & Hornstein, 1995; Green & Palfrey, 2000).

Disorders in Infant Mental Health.

The clinical focus of infant mental health includes the range of common questions about which health and educational providers are questioned, as well as serious behavioral concerns. For instance, providers are often asked for advice about feeding and sleeping problems, difficulties in getting the infant onto a schedule or routine (often considered "typical" problems), or concerns about language, motor, or cognitive development. Such discussions are opportunities to provide information that may prevent more serious problems from developing and/or to identify emerging problems that may benefit from early interventions.

Unfortunately, as early as the first year of life, some infants demonstrate significant behavioral or emotional problems, including odd behaviors or unusual social or emotional responses in certain situations. Even when an infant has a mild or sub-clinical problem, the dynamics of the interaction between caregiver and child may be altered: the caregiver may become more or less attentive, more nurturing or annoyed at the difficulties the infant presents. While such problems may not be disorders per se, they do affect the relationship between the infant and caregiver, and when the relationship is altered or stressed, the infant is likely to react.

Some young children exhibit patterns of behavior or social-emotional functioning that are clearly aberrant and maladaptive. Aside from the disturbing nature of the behaviors, these children often appear unhappy or even miserable. They may have associated delays that may be diagnosed simply as developmental delay unless the context of the child's experience is taken into consideration during assessment as well as treatment. Many of these can be identified in extreme risk populations, for example:

- children who have experienced abuse or neglect (Kaufman & Henirich, 2000),
- whose major caregiver suffers from significant mental illness or substance abuse (Seifer & Dickstein, 2000; Knitzer, 2000),
- children in institutional (Zeanah, 2000a) or foster care (Dicker, Gordon, & Knitzer, 2001),
- those who have experienced significant trauma (Scheeringa & Gaensbauer, 2000).

Diagnostic classifications for infancy are still being developed and validated, but some diagnoses may be identified reliably using well-operationalized diagnostic criteria (Scheeringa et al., 2003; Task Force for Research Diagnostic Criteria: Infancy and Preschool, 2003; Zero to Three, 1994). Clinical assessment of disorders in infant mental health focuses on recognizing the behavioral manifestations as well as understanding the subjective experiences of the caregiver and infant.

Specialized techniques are being developed to provide consistent and comprehensive assessment of children who are too young to verbalize their thoughts and feelings. Therapeutically, the goal of treatment is to improve the relationship. This goal can be accomplished by working with the child, the parent, or often, the dyad, as well as adjusting any environmental circumstances that are amenable to change. Research is actively underway to better understand how developmental processes impact the expression of disorders; diagnostic and classification issues; and assessment and intervention issues.

Summary

This overview of infant mental health attempts to convey the following main points, and **Figure 1** provides a summary of IMH principles that can be used to guide the development of IMH services**.**

Figure 1: Principles of Infant Mental Health (IMH)

- IMH is considered synonymous with healthy social and emotional development.
- Warm, nurturing, protective, stable, and consistent relationships provide the fundamental building blocks to IMH.
- Behavioral "markers" of IMH include emotion regulation, the ability to communicate feelings to caregivers, and active exploration of the environment. These behaviors lay the groundwork for later social and emotional competence, readiness to enter school, and better academic and social performance.
- Risk and protective factors have been clearly identified that relate to current and later function; infants can experience psychological disorders in the first three years of life.
- Any factors which impact the relationship between the infant and caregiver have the potential to impact the IMH.
- A continuum of services is needed to address preventive and treatment aspects of IMH; integration into existing networks and cross-system collaboration is essential.
- Programs that address IMH must focus on *relationships*, be based in current developmental knowledge, and be supportive of the family.
- Families need to be involved in the planning and delivery of IMH services.
- Values, including personal, family, ethnic, cultural, professional, and organizational, impact every aspect of IMH. Professionals working with infants and families need training and supervision in order to meet the social and emotional needs of children and families appropriate to the range and scope of services provided.

Authors' analysis.

Addressing IMH in the SECCS Initiative

When considering how to support IMH through a comprehensive system of services, it is important to recognize the variety of potential strategies. One set of strategies focuses on increasing access to services, given the limited number of highly trained mental health professionals. Such strategies include making services more available, better equipping healthcare and other service providers to play their appropriate part in promoting infant mental health and serve as efficient and effective sources of referral (USDHHS, 1999).

Another set of strategies focuses on the environmental factors that impact infant mental health. For instance, improving the financial well-being of families and communities will help to relieve the myriad of stresses associated with poverty and other environmental factors. The data are clear that the negative consequences of poverty are cumulative, pervasive, long lasting, and impact all aspects of physical, cognitive, and socioemotional development (Aber, Jones, and Cohen, 2000). Relief of poverty-related stressors can directly improve the health and social situations of young children and their families, ease stress on the parent-infant relationship, and directly and indirectly improve the social and emotional development of young children (see Aber, 2000 and Evans, 2004, for excellent reviews). Given that 16 percent of this nation's children live in poverty, and 7 percent live in extreme poverty, (Annie E. Casey, 2004), poverty should always be considered a significant negative, though modifiable, influence on infant mental health.

In developing services, the range of need also must be considered. **Figure 2** provides a model of three broad levels of intervention which constitute a continuum of IMH services. These services range from preventive approaches to psychotherapeutic treatment. The overall goals of IMH services across universal, focused, and tertiary services are similar:

- to enhance the ability of caregivers to nurture young children more effectively;
- to expand the ability of non-family caregivers to identify, address, and prevent socioemotional problems in early childhood; and
- to minimize or avert suffering, and ensure that families in need of more intensive services can obtain them.

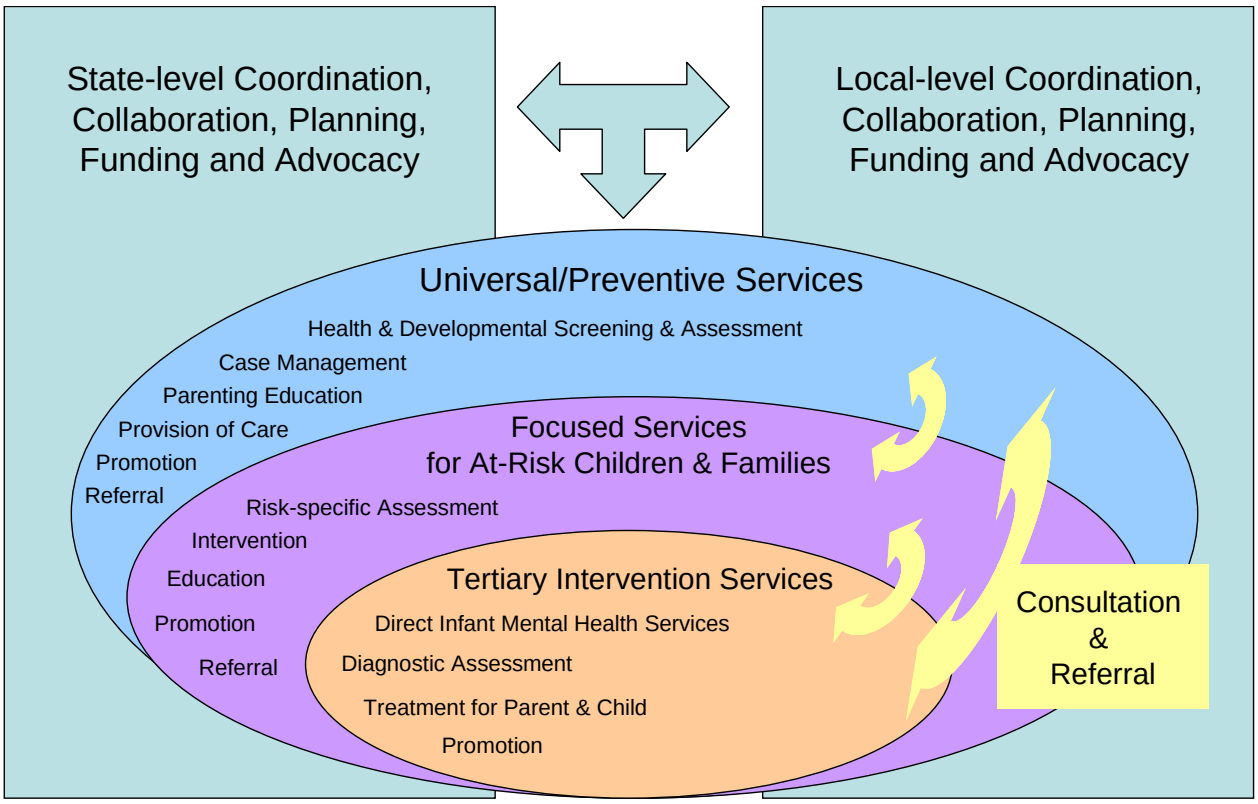
Because different service sectors vary in types of services they provide, as well as their skill and expertise with infant mental health (Zeanah, Larrieu & Zeanah, 2000), a continuum of IMH services is necessary not only to make available appropriate services for children and families (USDHHS, 2000), but emphasizes the need for cross-agency and cross-discipline collaboration. Integration of appropriate IMH strategies into all early childhood service settings enhances the likelihood that substantial contributions to the social and emotional development of young children will occur. This framework is bound by state level and local-level advocacy, communication, collaboration, funding, planning and advocacy. Ideally, state and local entities work in a parallel process to foster and enhance the development and structure of IMH services. Where a state begins will depend on its organizational structure; federal, state, and local resources; community needs; and available expertise, but the following brief descriptions show the types of services that might be available along the continuum:

- Primary prevention, or universal, approaches are aimed at improving child development, parenting knowledge and behavior, and infant mental health for all families within their service range. These approaches can take place in any setting, but primarily in health care,

early childhood education and child care, and family support settings. Strategies generally include promotion, screening and assessment, education and guidance, and referral for more intensive services when needed.

- Focused, or targeted approaches are aimed at specifically identified groups considered at risk for developing potentially serious social or emotional problems. These approaches may be generated from any setting that serves individuals at risk. Examples include early intervention for premature or low birth weight babies, home visiting services for first time mothers, or preventive interventions for abused or neglected children. Family support interventions include income assistance, adult basic and secondary education, parenting education to promote positive parent child interaction and interventions that address environmental risk factors like poverty.
- Intensive, or tertiary services serve infants and caregivers experiencing current difficulties, and also attempt to prevent or lessen future problems. These services are most likely to come out of mental health programs, and may be provided for those infants currently experiencing suffering, such as those who have experienced significant trauma, or for whom there are significant parent-infant relationship problems.

Figure 2: Levels of Infant Mental Health Care



The following sections provide more specific examples of how IMH can be integrated into universal, focused, and tertiary services. This is not an exhaustive review, rather it is intended to give states ideas about the array of needs and services that can be addressed and provided.

Universal and preventive approaches in primary care settings

Health care, early education and child care, and family support settings typically provide information and support to parents. Since the majority of young children and their families frequent these settings and may have relationships of trust with their providers, it makes sense that IMH interventions are incorporated into the usual activities of these settings. Because parents are most likely to turn to their health care provider for information regarding parenting and child development (Inkelas, 2002a; Inkelas, 2002b)**,** and are sometimes left with their guidance needs unmet (Olson et al, 2004) we first present the medical home as a model for how universal infant mental health services can be integrated into current services. However, young children and families also have very significant, regular contact with early education and child care or family support services, so approaches for these services also are described.

Child and parent health services

The reports in this series outline a system of care comprised of mutually supportive entry points including the medical home, early care and education (ECE) provider, and family support providers. The report *Medical Home: Improving Systems of Health and Developmental Services in Early Childhood"* (Inkelas, manuscript) specifically addresses recommendations for the role of the medical home in providing health and developmental services. The information in this report fits this framework outlined in the *Medical Home* report, as well as the American Academy of Pediatrics (AAP, 1997) and the Maternal and Child Health Bureau's Bright Futures Initiative (Green & Palfrey, 2000) efforts to provide detailed recommendations for pediatric health practitioners regarding developmental services. This system of care can provide the surveillance necessary to identify infant mental health concerns and parental mental health problems that can impact the birth and developmental outcomes of children before they become intractable. Also, the system can help promote mental health, and refer parents and children to additional resources and treatment.

Attention to factors that impact social and emotional development should begin before the infant is born, as parents can have clear expectations and perceptions about their baby's personality that predict how the infant is perceived after birth, and success of later attachment (Cohen & Slade, 2000). In addition, women with a history of current or past mental illness, especially depression or substance abuse; a history of multiple losses, including pregnancy losses; and/or a history of being abused, neglected, or current or past partner violence are at risk for poor parenting outcomes, prenatal and postnatal depression and other mental health problems. These identifiable psychosocial risk factors can result in negative pregnancy outcomes, and may be associated with increased risk for parenting difficulties; therefore, psychosocial screening can and should occur prenatally (Committee for Health Care for Underserved Women, 1999; Midmer, 1996; Wilkinson et al, 1998; ACOG, 2002). An example of a tool used for screening is the Edinburgh Postnatal Depression Scale (EPDS).

Current pediatric practice emphasizes the need for behavioral and developmental surveillance as part of preventive health care. Halfon, Regalado et al (2003) suggest four main categories for developmental services:

- *Assessment*—including obtaining and integrating information obtained via parent report, parent-child observations, child behavior assessments, developmental monitoring, and psychosocial screening.
- *Educational services*—including anticipatory guidance regarding normal development and child behavior, the parent-infant relationship, and developmental issues; parenting education, and specific instruction by a physician or nurse.
- *Intervention services*—including services such as office-based counseling, telephone hot lines, or home visitation.
- *Care coordination*—facilitating referrals for diagnostic or specialty care.

The details of each of these services are elaborated elsewhere (Halfon, Regaldo, et al, 2003). However, this typology provides a framework for how infant mental health can be integrated into general pediatric strategies. In **Table 1**, this typology is extended to show how these services can constitute a continuum of services within a primary care setting. Level 1 represents "baseline" services that all children, with or without problems, should receive. Level 2 incorporates services for children and families for whom there are significant risks present, and/or when there are mild or sub-clinical problems in socioemotional development or parent-infant relationships. In these situations, additional assessment and intervention is warranted to avert adverse outcomes. For example, an infant with a difficult temperament and a caregiver with severe or mild depression is at risk for insecure attachment; the pediatric provider will need to spend additional time addressing the mother's depression (i.e., perform depression screen, discuss impression, refer for further evaluation or treatment) and also will need to work with the parent to understand her baby's behavior and develop appropriate responses to help to modify the baby's behavior. Level 3 represents the situation when overt problems are present and require specialized treatment, for example a child who experiences post-traumatic stress disorder after a serious car accident. The pediatric provider is likely to be the one to identify the child as having a maladaptive response to the event and refer for diagnostic assessment and treatment. While the problem-specific treatment may be performed by a mental health provider, the pediatric provider remains involved with the family, may provide increased monitoring, support and information, and will be involved in treatment planning and coordination of care with other providers and services as needed.

Table 1: Continuum of Socioemotional Services within Primary Care

Type of Service	Level of Problem		
	Level 1: None or "typical"	**Level 2: Mild or subclinical**	**Level 3: Identified problem**
Assessment	Clinical history/intake/parent report Psychosocial / Environmental screen Developmental screening Parent-child observations	Problem-specific assessment for parent or child Periodic re-assessment	Ongoing monitoring for improvement and/or emerging or associated problems
Education	Anticipatory guidance Specific education or instruction	Problem-specific information	Problem-specific information
Intervention	Support/interest Reinforce positive Counseling for 'typical' problems Routine follow-up	Problem-specific counseling Home visit Increased monitoring	Problem-specific interventions - Referrals Increased and/or ongoing monitoring
Care Coordination	None or Refer for additional educational or support services	Refer for specialty diagnostic services Refer to focused services Link to ancillary support services	Treatment planning and coordination of care with specialty and/or support services

Authors' analysis.

Because Level 2 and Level 3 services may require a significant amount of time, a number of models for delivery of care that can be incorporated into a variety of pediatric health care settings have been described. Typically these approaches involve incorporating a multidisciplinary team approach or use of family advocates or developmental specialists (see Fenichel, 1997; Minkovitz et al, 2003). Zero to Three's Developmental Specialist in Pediatric Practice Project is one example of how developmental specialists were used to enhance information and services to parents at two pediatric sites in the Washington D.C. area. These specialists were a vital component of the pediatric team and worked to better serve the families in their practice. Their main goals were to provide anticipatory guidance, to identify emerging developmental problems, to intervene early to address developmental or parenting concerns and to link children and families to additional services (Eggbeer, Lerner Littman & Jones, 1997). These approaches appear to be well-accepted by parents, increase their satisfaction with care overall, and may result in cost savings (Kaplan-Sanoff,

Brown & Zuckerman, 1997)**.** These approaches are important to consider because, even in existing systems where psychosocial issues are addressed, parents often feel unsatisfied and pediatricians often feel uncomfortable discussing behavioral/psychosocial issues (Glascoe, 2000; Halfon et al 2003).

This next section describes in more detail each intervention component and strategies for accomplishing each with regard to infant mental health. As noted previously, there is not a "gold standard" for providing socioemotional or IMH services in primary settings. Clinicians must use multiple sources of information to identify a problem, determine the complicated interplay of factors that may be causing it, and determine a treatment.

Assessment

While the pediatric clinician has much data before her to sift through, it is important to recognize there are limits and biases in many sources of information and as such a few cautions relative to socioemotional and behavioral assessment in young children.

- First, there is variability in caregivers' knowledge, experiences and perspectives about the child's behaviors, and there may be real differences in infants' and young children's reported and observed behaviors depending on the relationship (relationship specificity). Since most tools focus on child behaviors, the relationship aspects are not addressed. Thus, exclusive reliance on parent report, or over-reliance on screening tools may not be sufficient to assess socioemotional development.
- Second, though caregivers are reliable reporters of some aspects of child development (Glascoe, 2000), there is ample evidence that there is a low degree of agreement among parents, teachers, and health/mental health providers' ratings about the seriousness of behavior problems in young children (Zeanah, Boris & Scheeringa, 1997). Thus, it is important to obtain information from multiple informants whenever possible.
- Third, other issues relating to assessment include inconsistent use of or inappropriate administration of measures. Also providers may have ethical concerns about using such screens when services are not readily available or experience discomfort in discussing issues they feel unprepared to address (Glascoe, 2000).
- Finally, while health care professionals are in an excellent position to obtain this information, the quality of information obtained depends partly on the quality of the relationship between the professional and the caregiver (Green & Palfrey, 2002; Heneghan, Mercer, & DeLeone, 2004).

Despite these cautions, it is possible to conduct an assessment that is comprehensive enough to identify risk factors and perhaps even to identify specific problems of socioemotional development in the course of a brief child health visit. We believe assessment must address the multiple factors that affect the child's socioemotional development. These factors can be divided into four major domains: environmental, child's physical health and development, parental/caregiver factors, and the relationship between the infant and caregiver. **Appendix A** provides examples of risk factors in each domain, as well as methods for assessment for primary care settings.

Information regarding historical and environmental/psychosocial factors can be obtained through routine clinical history taking and parent-completed intake forms (for example, see Jellinek et al, 2002a, and www.brightfutures.org/mentalhealth). Physical assessment clearly provides the

opportunity to determine if there are physical problems, but also can be used to teach the parent about the infant's growth and development. Parents expect the pediatric provider to share this information (Heneghan, Mercer & DeLeone, 2004), and the parent's and provider's shared interest in the child's health is an important avenue for discussing related psychosocial issues.

Observations of parent-infant interactions provide a rich source of information regarding the relationship between the parent and infant, and also provide opportunities for intervention (Green & Palfrey, 2002; Brazelton, 1995)**.** At present, there are not systematic tools for these observations in pediatric settings, however, informal observations performed consistently can yield useful assessment information. *Bright Futures* highlights observations that are particularly salient to the quality of the relationship. Specific observation questions are provided for each stage of a child's development. For example, during infancy at the newborn visit observation questions include:

- Are parents comfortable when feeding, holding or caring for the baby?
- Does the baby latch on to the breast and suck well when breastfeeding?

During early childhood, questions include:

- Are the parent and toddler interested in and responsive to each other (i.e., sharing vocalizations, smiles and facial expressions)?
- Does the parent speak to the toddler in positive terms? (Green & Palfrey, 2002; Jellinek, 2002a).

Developmental screening is also an important component of IMH assessment. Although a number of valid and reliable instruments are available for screening for general developmental problems, studies indicate primary care providers do not routinely use screening tools (Glascoe, 2000). A recently developed tool, the PEDS (Parents' Evaluation of Developmental Status, Glascoe, 1997) obtains information regarding the parent's concerns about several domains of development is brief, easy to score, and has been found to reliably identify children with developmental disabilities.

Clinicians should consider using more detailed or problem-focused screening tools when a concern is raised either by parent report or observation, or when repeated assessment for monitoring is indicated. With the cautions regarding parent-report noted earlier in mind, the following screening tools can be helpful in monitoring development more closely, or identifying behavior problems more specifically:

- The Ages and Stages Questionnaires (ASQ, Squires & Bricker**,** 1999) consists of 30 items, covers gross motor, communication, problem-solving and socioemotional domains for children ages 4 to 60 months, and takes about 15 minutes to complete.
- The Ages and Stages Questionnaires also includes a version that specifically addresses socioemotional development (ASQ-SE, Squires, Bricker & Twombly**,** 2002), including self-regulation, compliance, autonomy, communication, adaptive functioning, affect, and interactions with others). Both versions have excellent reliability and validity as well as specificity for identifying potential problems, and because they are age-linked, can be useful in assessing age-specific developmental achievements or delays.
- The Child Behavior Checklist, Early Childhood Inventory (Achenbach, 1992), has extensive age-normed data to identify children in the clinical range of problem behaviors.
- The Brief Infant and Toddler Social and Emotional Assessment (BITSEA, Carter & Briggs-Gowan, 2000) is also problem-oriented, but includes an assessment of competencies.

- The Eyberg (Eyberg & Pincus, 1999) is another common instrument to assess behavior problems for children ages one to five years.

Drawbacks associated with the use of such instruments include:

- Too lengthy or difficult to score (i.e., Child Behavior Checklist, Early Childhood Inventory, Achenbach, 1992; Brief Infant and Toddler Social and Emotional Assessment, Carter & Briggs-Gowan, 2000);
- Too problem-specific (i.e., Eyberg & Pincus, 1999);
- Problems associated with having different versions of a questionnaire for different age groups (Ages & Stages, Squires, Bricker, & Twombly, 1999).

By using one or two of these instruments regularly, clinicians can become familiar and comfortable with the data provided by such screening tools.

Increasingly, there is emphasis on screening caregivers for a variety of psychosocial and mental health concerns (i.e., Green & Palfrey, 2000; Jellinek, 2002) and reliable and valid tools are available for problems such as maternal depression and substance abuse (see Jellinek, 2002). Recently published studies recommend caution regarding screening for family and partner violence (Nygren, Nelson, &b Klein, 2004; U.S. Preventive Service Task Force, 2004), despite the prevalence of these problems and their profound impact on child development because many clinicians do not feel comfortable asking about or addressing these issues if a problem is identified (AAP 2000)**.** If such tools are used, clinicians need training not only in the administration of such tools, but also their rationale and clinical use, and they should have resources for referral when problems are detected.

Preventive infant mental health assessment therefore includes attention to environmental, child, caregiver, and relationship risk factors inn addition to social, emotional, and behavioral competencies, strengths and protective factors, that are associated with the infant developing a strong, secure attachment relationship with the caregiver. Systematic efforts to identify and address infant mental health problems must be accompanied by training, referral resources, and enhanced communication between the agent of referral and the treatment source. Finally, clinicians need to recognize that an increased number of risk factors is associated with increased risk of poor outcomes, even if there are not specific developmental delays or deviances currently present (Sameroff and Fiese, 2000).

Educational services

Informing parents about their child's health and development is a major function of health care providers, so providing information on socioemotional development, and by extension, the caregiver-child relationship, is a natural extension. The report in this series *Promoting Positive Parenting Practices through Parenting Education* describes a number of effective strategies for parenting education (Zepeda, Varela, & Morales, 2004).

A powerful approach that can be used in any setting is the use of observations to demonstrate development and relationship issues. For example, a provider might point out to a parent the child's preference for the parent when distressed, or underscore the importance of positive interactions when discussing the what, when, and how's of feeding. These situations create "teachable

moments," (Brazelton, 1995) and enable the provider to reinforce positive interactions, gently correct misinterpretations of behavior, and highlight common and age-appropriate behaviors.

As with assessment, education is most effective within the context of a respectful, positive relationship. As noted previously, parents want the information from pediatric health professionals, yet they often are dissatisfied because they feel their concerns are not adequately addressed (Halfon, 2002b), and pediatricians voice numerous impediments to providing such information (AAP 2000). Although a number of approaches have been described to address the need for parents to get questions and concerns addressed (Zero to Three, 1997; Zepeda et al, 2004), there are no simple solutions to this dilemma. However, when the clinician routinely makes the effort to develop the "conversation" regarding the infant's behavior, the parent is more likely to discuss psychosocial issues (Inkelas, 2002b).

A system of care that includes multiple entry points should also be characterized by service providers that share consistent messages with parents and families. The consistent focus for anticipatory guidance and parenting education, from an IMH perspective, is the importance of a nurturing, consistent, predictable, and positive relationship between the caregiver and infant. This emphasis is important whether or not the child demonstrates overt problems, or needs additional services

Intervention services

In general, IMH interventions in primary settings will center on education and counseling about typical as well as problematic behaviors. Continuing medical education for providers and appropriate training for medical students can address the preparation and training concerns that pediatric providers have expressed with regard to providing information about many socioemotional issues (AAP 2000). Furthermore, specific materials targeting the primary care setting and its role in addressing mental health issues can build provider capacity. For example, the Bright Futures in Practice: Mental Health (Jellinek et al., 2002) guidelines emphasize the relationship between the infant and caregiver when addressing issues about common concerns during infancy and early childhood, such as temperament, feeding, sleep, and infant distress. In addition, the guidelines discuss:

- parental functioning and family relationships,
- the importance of attachment (including recognizing infant cues and responding in a sensitive manner),
- providing a stimulating environment at home and obtaining appropriate child care,
- socialization and peer relationships, and
- common behavioral problems.

The guidelines provide assistance in a straightforward, developmentally sound, and relationship-sensitive manner. They also emphasize the importance of the provider-parent relationship in facilitating a discussion about the infant's behaviors and abilities.

Again, the use of a team approach in busy primary practice settings can expand the capability of the service to address a broader range of problems. In some practice settings, home visiting is a valuable option. The type and amount of information available by visiting the home compared to the clinic setting adds essential data not only in understanding the family's situation, but also can be a more ecologically sound way of providing services. Of course, pediatric professionals always

have the option of increasing monitoring. Increased monitoring not only serves to keep track of the problem, but also can be one way to provide substantial support for parents, even if the visits are brief. Coordination with the early care and education provider may also give the pediatric provider access to a wealth of additional information.

Care management

Making referrals for potential or active IMH problems can be fraught with difficulties ranging from lack of available or convenient services, provider discomfort in presenting concerns to the parent, and conflicting personal values about parenting and mental health. Those situations are in addition to parents having biases about mental health services, or feeling blamed or criticized. Only a small percentage of families are believed to follow through on referrals when they are made, though data are needed in this regard. As systems develop, practitioners need to learn skills to make more effective referrals. Systems should also track the characteristics of services that are used, and those that are not, when referrals are made. Even if a referral is successful, the pediatric provider and referral agent should coordinate and discuss a plan of care as needed.

Early childhood education

Like a child's health and health care, early care and education can have significant and long term impacts on a child's development and eventual life success. The quality of care in an ECE setting can directly support a child's development by providing a learning environment. Like pediatric providers, ECE providers often have relationships of trust with their clients, and this relationship creates the opportunity for ECE providers to impact parent-child relationships, as well as act as an entry point to a broad network of early childhood services. Therefore, it is important that ECE providers be equipped with the knowledge, skills, tools and relationships to provide quality care nested within a community of resources.

The National Institute of Child Health and Human Development's (NICHD, 2000) national longitudinal study of early child care concluded that among child care variables, quality of care giving was the most important predictor of child adaptation. The following factors were associated with positive care giving in a child care setting:

- smaller group sizes,
- lower child-adult ratios,
- the caregivers' non-authoritarian child rearing beliefs, and
- a safe, clean, stimulating physical environment.

Caregivers also need to

- have adequate knowledge of socioemotional development;
- establish predictable times for eating, play, and rest;
- use age-appropriate behavior management strategies; and
- develop a positive partnership with parents through frequent, open, and culturally appropriate communication with parents—necessitating training on effective communication techniques.

Child care sites can be a resource for providing information to parents about social and emotional development, as well as cognitive development and learning styles. Information about resources and referral services should be readily available. Screening and/or observational assessments regarding

social and emotional development can be provided in child care settings if there is adequate staff training and support.

The Child Care and Development Fund (CCDF) and Head Start provide funds for developing child care and education services for young children;. Both of these funding sources are being used to provide mental health consultation and training for staff to improve the quality of classroom environments and interactions with children with behavioral difficulties. Some Head Start and Early Head Start programs are obtaining mental health consultation on a regular basis to provide training and guidance to staff, as well as assistance in the identification and management of behavioral and socioemotional issues that present in the child care setting (Johnson, Knitzer, & Kaufman, 2002; see also, Fenichel, 2001, whole issue).

In sum, not only do early care and education providers nurture child development through creating a positive learning environment for children in their care, but they also have roles to play in each of the categories outlined in the above section: assessment, education, intervention, and care coordination. These roles are based on the trust formed between child care providers and parents, as they may be looked to for information and advice about child rearing. If providers are sufficiently trained to identify and intervene appropriately within the child care setting, and/or if the center has resources for education and guidance. ECE can then be an important setting to improve socioemotional and behavioral health of young children and their families.

Parenting education and family support services

Many parenting education and family support providers have established trusting relationships with the parents and children in their care. These providers can provide general information as well as refer families to community resources when they encounter sub-clinical and clinical concerns. Again, the foundation for the use of family support providers as an entry point into the broad early childhood service system is their relationship with parents. Families are more likely to use the educational or support services offered if they:

- have a positive relationship with the provider,
- believe they need the information or services,
- are motivated to make changes, and
- if the services/information are presented in a culturally relevant, appealing manner.

As noted by Zepeda et al (2004) in their report for this series *Promoting Positive Parenting Practices through Parent Education*, there are multiple platforms in which information and services can be provided, including WIC sites, one-stop job centers, family resource centers, etc. These sites can serve as hubs for service provision and referral, and link their clients to the health, ECE and other resources in the community.

Zepeda et. al also describe a continuum of parental awareness regarding parent need for information, ranging from the passive receipt of information to the active application of knowledge and information. It is important to recognize, once again, that parenting practices are generally embedded in a well-developed set of values and experiences, and thus, may be difficult to change (Prochaska, DiClemente, & Norcross, 1992). Parents may perceive criticism even if the provider tries to present material in a non-judgmental manner. Because parenting practices are heavily influenced by family values and pressures, the parent who decides to make changes in long-

established practices risks ridicule, pressure, or other negative consequences. Thus, changing parenting behaviors has implications not only for the parent's behaviors but also the intergenerational family system as well.

Focused (Indicated) Services

Focused, or indicated services aim to reduce the likelihood of negative health, developmental, or mental health outcomes related to the presence of identified risk factors. Caregivers and/or young children are referred into such services because they manifest specific risk factors, but they may or may not show specific symptoms or deficits. These services typically include problem-specific screening and assessment, risk-specific interventions, including information and education, monitoring, and outcome assessment.

From a systems perspective, focused programs not only provide an important set of services, they also can serve as a stepping stone, or bridge, for developing a more fully integrated system. For example, when establishing programs to address IMH issues, it may make more sense for a state to focus on children with the highest need. Once the ability of such a program is shown to have value, or while that program is growing, the broader array of services impacting the full child and family population can be developed.

Focused programs usually evolve and develop out of needs identified in specific systems (i.e., health, educational, child protection, mental health). However, as is demonstrated by the examples below, services in a focused program need to be integrated with services that address families' overlapping health, social, mental health, and relational issues. Examples of groups at risk for poor IMH outcomes include children of poor or teen mothers, children whose mothers are depressed or have other mental disorders, and children with special health care needs and their families (Seifer & Dickstein, 2000, Zeanah, 2000). Other examples of children for whom focused services may make a difference include young children in foster care (Dicker, Gordon, & Knitzer, 2001; Smyke, Wajda-Johnston & Zeanah, in press; Halfon & Inkelas et al., 2002), and internationally adopted children (Zeanah, 2000a). Finally, focused services may be provided for groups of children who are at the highest risk of poor outcomes, including children who are abused or neglected, children who witness domestic violence, and children of substance-abusing parents. Children in these highest risk groups require specialized expertise in IMH assessment, provision of service, collaboration, and treatment (tertiary services).

While all focused programs are preventive, treatment may be needed if problems are apparent, so some of these programs involve both preventive and treatment approaches. Focused services vary in terms of their intensity, duration, place of delivery of services (i.e., health clinics, schools, child care centers, home), type of provider (i.e., paraprofessional vs. professional), and scope of services.

Next, examples are provided of evidence-based focused programs. While they vary in their focus, intensity and approaches, all ultimately aim to improve circumstances that will impact the caregiver-infant relationship and improve child developmental outcomes.

First time, poor mothers. The Nurse Family Partnership (NFP) is a nurse home visiting program in which nurses work with first time, poor mothers from prior to the 28th week of pregnancy through

age 2. Through a series of randomized controlled studies (Olds, Henderson, et al, 1986; Olds, Henderson, et al, 1988; Olds, Eckenrode, et al, 1997), the relationship-based approach has shown substantial decreases in a variety of child health and development problems, including child abuse and neglect and accidents and injuries. Furthermore, the program has shown significant long- term outcomes in both child and maternal behavioral indices (Olds, Eckenrode, et al, 1997; Korfmacher, 1997). Though not addressing mental health per se, the model finds that women in the program show significant decreases in self-reports of depression (Nagle & Boris, 2004). This program is a good example of one in which the intensity and length of services are appropriate for some groups of first time mothers, but not effective for others (Olds, Henderson, Kitzman et al, 1998).

Mothers with few resources. The Clinical Nursing Models Project (Barnard, Booth et al, 1988) is a nurse home visiting program which uses a relationship-building, "mental health" model to increase social communication between mother and infant, increase the mother's sense of competence, and decrease the mother's sense of isolation. The program was found to be more efficacious than a traditional program that focused on simply providing educational and resource information (Barnard, Morisset, and Spieker, 1993).

Head Start parents. The Partners Project addressed IMH by addressing the parent-child relationship. The project, which incorporated relationship-building principles, was integrated into the parent-involvement component of a Head Start program. The goal was to promote positive parent-child relationships by using guided group discussion of videotaped vignettes of common and often troublesome situations. Evaluations at the end of the intervention and 6 months later documented increased parental participation, perceived parenting competence, and educational involvement. The fact that the one group of mothers that did not benefit from the intervention were ones with identified mental illness (Yoshikawa & Knitzer, 1997) further demonstrates that family support providers need to be linked to resources that can address all relevant family needs.

Other examples of focused interventions within a Head Start setting include

- provision of on-site mental health consultation to staff in primary settings (Wallach & Lister, 1995)
- ongoing, on-site center training (Knitzer, 1996) and
- group interventions designed to improve attachment between infants and teenage mothers (Johnson, Knitzer, & Kaufman, 2002; Knitzer, 2000; Marvin, Cooper, Hoffman & Powell, 2002).

Intensive (Tertiary) Services

Intensive or tertiary services are those that provide specialized IMH treatment to young children identified as being at highest risk for poor health and developmental outcomes. Extremely vulnerable children include those in foster care, children of substance abusing parents, children of parents with severe mental illness, and children exposed to violence (Harden, 2004; Knitzer, 2000; Halfon and Inkelas et al, 2002). These young children are at high risk of having been mistreated. They frequently display serious behavior problems, and may manifest conditions that can seriously impede their lifelong learning and later success. Further, they are less likely to receive regular health care, may be less likely to receive adequate child care experiences, and are most likely to intersect with the judicial and child welfare systems.

Many of these intervention services do not operate within an early childhood system of care, but have adapted close collaboration with related services to achieve their program goals. Because they have specialized expertise in various aspects of health, development, mental health, and IMH these focused/tertiary programs can serve as an integral piece, and also can provide the impetus for the development of a fully developed early childhood system of care. The following are 3 examples of intensive (tertiary) services.

Abused and neglected children. The Tulane/Jefferson Parish Infant Team is a multi-disciplinary program that serves children less than five years of age who are in foster care due to abuse or neglect. Children and their families are court-ordered to the team for IMH assessment and treatment for the children, including their relationships with their biological and foster families. Assessment and treatment involves active collaboration between the child protective services system, juvenile court, community mental health/substance abuse/developmental disabilities services system, and an academically based clinical team (Larrieu & Zeanah, 1998). Following an extensive assessment, the team makes recommendations about permanency placement, considering the best interests of the child, to the court and to child protective services. Because of their commitment to integrated service provision, the team provides a comprehensive array of services. These services include developmental and behavioral evaluation of all children, speech and language therapy on-site, and relationship based IMH treatment in the home or clinic. In addition, the team refers parents for substance abuse counseling or children for genetics evaluation. The team coordinates and integrates these referrals into the child's treatment plan. A case cohort evaluation of this approach demonstrated a substantial reduction in maltreatment recidivism for young children, and a substantial reduction in maternal recidivism with a subsequent child (Zeanah, Larrieu, et al., 2001).

Infants of substance abusing mothers. A mother abusing substances exposes her child to multiple levels of risk (Lester & Tronick, 1994). Specifically, prenatal exposure to drugs may lead to developmental impairments as well as behavioral instability and these changes may make the child more difficult to parent. In addition, the acute intoxication by a substance interferes with her ability to reciprocally interact with her infant. Long-term use of substances is also associated with neuropsychological dysfunction, including depressive states, loss of short-term memory, and altered attention levels (Mayes, 1995). Finally, the lifestyle factors associated with substance abuse also result in increased exposure to a chaotic, disorganized lifestyle that includes disrupted parenting, poverty, stress, and exposure to violence (Lester & Tronick, 1994). Infants born to substance-abusing mothers are at higher risk for learning and behavioral problems (Mayes, 1995). Indeed, 65 percent of children whose mothers use drugs have a major psychiatric disorder by adolescence (Luthar et al, 1997). The aggregation of these factors requires specialized programs with built-in wrap-around services to address the numerous risk factors. The challenges of parenting a young child are rarely addressed by programs working with substance abusing parents. The Relational Psychotherapy Mother's Group is a program that incorporates attention to parenting issues within the context of substance abuse (Luthar & Suchman, 1999). The aim of this program is to address co-morbidity, the impact of trauma, and to provide a nurturing experience to women through a supportive group process run by a therapist and a drug counselor. Outcomes demonstrate that, compared to a control sample, mothers in the RPMG group fared better over time than mothers in traditional treatment on maternal maltreatment, satisfaction in the maternal role, and positive

interactions with their children, Their children also demonstrated improved psychosocial adjustment (Luthar & Suchman, 1999).

Starting Early Starting Secure (SESS) aims "to develop child-centered, family-focused, and community-based interventions in child care and child health settings…(targeting) children up to age seven who are affected by alcohol or substance abuse and serious mental health issues, and to prevent their entry or greater penetration into the child welfare system" (Knitzer, 2000, p. 7). The service sites include primary health clinics, in which families are linked to specialists, receive advocacy services, health and safety education, and in some cases, therapeutic services. Services in child care settings include interventions for children with the more challenging issues, including behavioral problems. Staff and parent training are offered as well. Two other SESS programs focus on Native Americans and children in foster care.

Challenges and Opportunities in Mental Health Systems

This section focuses on the mental health care system in general because it is most likely to be the system that primary care providers turn to for tertiary (specialized, intensive) services for children and families. Collaboration between the different health sectors and the mental health system is essential to assure a full range of early childhood services. For the SECCS initiative to be most effective, it is important to be aware of the limitations, issues, as well as opportunities most likely to be encountered in the mental health system. When discussing the the mental health system it is important to remember that

- IMH is a new field and a new topic to the established mental health system
- mental health issues in young children have complicated roots and young children with significant mental health needs are likely to also have significant health and educational needs (Reems, 1999; Rosenfled et al., 1997)
- there is much overlap in the systems in which health and mental health interface (i.e., child care, early child education, family support, as well as child welfare and judiciary systems).

The following sections, briefly outline some of the current mental health system limitations in providing services for young children and their caregivers. Included in the discussion are two examples of comprehensive early childhood initiatives that specifically address mental health concerns of young children and their families.

<u>Current limitations in mental health systems</u>

The current approach to mental health service provision runs contrary to much of what is intrinsic to the nature of infant mental health. IMH is characterized by a strong emphasis on prevention, recognition and anticipation of categorical developmental shifts in the infant's social-emotional capacities, and the focus on the child's primary caregiving relationship as the crux of the child's environmental and cultural experience. However, current mental health assessment, diagnosis and treatment are based on a *within the individual* perspective. Realigning the mental health system will require fundamental shifts in terms of how the system understands IMH, how providers are trained, and how services are funded.

Second, the science of psychopathology in early childhood is in its own infancy. (Johnson, Knitzer, & Kaufman, 2002). To date, there are no established best practices—leading to confusion about

how to deal with very young children with challenging behaviors (Bryant, et al., 1988). Diagnostic criteria for disorders in early childhood are evolving (Task Force for Research Diagnostic Criteria: Infancy and Preschool, 2003; Zero to Three, 1994). Despite increasing use of psychotropic medications for young children, such drugs *have not been approved* for use in young children. There is neither a systematic data base, clear criteria for treatment or dosage recommendations that have been identified or standardized for pediatric use (Greenhill et al. 2003).

In many instances, families voicing concerns about infants and toddlers with significant psychiatric problems cannot obtain care because mental health centers rely on eligibility requirements that are not developmentally appropriate for young children. In addition, some IMH therapeutic approaches fall within the usual services provided, such as behavioral management, or family therapy. Relationship-based approaches like infant-parent dyadic therapy and the provision of services in natural settings (like homes) are alien to much of this system. In some instances, the use of medications or a strict behavioral focus has replaced treatment directed at enhancing parents' capacity to reflect upon their perceptions of the situation and nurture their attachment relationship with their child.

Eligibility requirements also may affect parents' ability to receive needed services. Caregivers with mild to moderate mental illness may not receive psychiatric services because their symptoms do not meet local impairment criteria. In many jurisdictions, for example, caregivers suffering from depression, will not receive public mental health services unless they are psychotic or suicidal, despite knowledge that parental depression is a significant risk factor for the child's socio-emotional development.

While appropriate treatment of parental mental illness is necessary for preventing and treating IMH problems, it is not clear whether standard treatment of parent mental health is sufficient to address the co-occurring parent-infant relationship problems. A majority of those treated for depression and anxiety are treated by their primary care health provider—in part because of the lack of sufficient mental health resources, as well as biases or stigma attached to mental health treatment. Data suggest that primary care providers under-recognize and under-treat these symptoms (Heneghan**,** et al, 2000)**.** Even when parents' mental health conditions are treated in the best evidence-based manner, it is unlikely that the treatment will address the specific, related parenting or parent-infant relationship issues.

Although the overall picture is rather discouraging, new programs are being developed that hold promise for better IMH treatment. Next, comprehensive care is described in terms of mental health, The discussion includes two examples of focused IMH services that have shown effectiveness not only in decreasing current symptoms, but also seem to prevent or decrease the likelihood of problems as the child grows.

<u>Comprehensive IMH services</u>

While mental health service provision for children in general suffers from the lack of an integrated system of care some resources are available to build from. Knitzer's (1982) landmark report, <u>Unclaimed Children,</u> documented the lack of connection between child welfare, juvenile justice, special education, health, and mental health services. In response, the federal government funded the Children and Adolescent Services Program (CASSP). This program aims to ensure that children

and adolescents with the most serious emotional problems will get their needs met without having to qualify for child welfare, juvenile justice, or special education services. CASSP supports a multi-agency approach to the delivery of services that need to be community-based, child-centered, and family-focused (Friedman & Stroul, 1986). Though CASSP focuses on children with serious emotional problems, the principles of care are consistent with the goals of the SECCS effort **(Figure 3).**

Figure 3: Principles of Systems of Care

1. Children should have access to a comprehensive and integrated array of services that address their physical, emotional, social, and educational needs in accordance with the unique needs and potentials of each child.
2. The services should be guided by an individualized service plan and provided within the least restrictive, most normative environment that is clinically appropriate.
3. Families and surrogate families of children with emotional disturbances should be full participants in all aspects of the planning and delivery of services and provided with case management to ensure that multiple services are delivered in a coordinated and therapeutic manner and that they can move through the system of services in accordance with their changing needs.
4. Early identification and intervention with children for children with emotional disturbances should be promoted by the system of care in order to enhance the likelihood of positive outcomes.

From Friedman & Stroul, 1986

A state of the art system of care (SOC) for early childhood mental health would combine principles espoused by Knitzer (2002) and Friedman and Stroul (1986). Principles include offering wraparound services and the application of current IMH practices. Such a system, well-integrated with primary care systems, could enhance the likelihood of obtaining the overriding goal of any early childhood system of care. The goal is to create a community "holding environment" that supports the child's primary "holding environment" (Winnicott, 1965) by minimizing individual, family, and environmental risk factors in order to foster optimal biological, psychological, and socioemotional development.

Appendix B describes efforts in Louisiana and California to develop comprehensive early childhood mental health systems. These programs include the Louisiana Early Childhood Supports and Services program and the California Infant, Preschool, and Family Mental Health Initiative. They represent different approaches, developed through mental health systems, to address infant and early childhood mental health problems. This Louisiana program had initial funding from Temporary Assistance for Needy Families (TANF) grant funds. This funding is flexible, and has provided an essential element of the "buy-in" from families and local organizations whose own resources are limited. The California Infant, Preschool, and Family Mental Health Initiative also represents a collaborative effort involving county departments of mental health and their interagency community partners. The collaborators work to develop early childhood mental health services, with a focus on relationship-based early intervention for children from birth to five and their families. The administering agency for this program is the WestEd Center for Prevention and Early Intervention and the eight participating counties are Alameda, Fresno, Humboldt, Los Angeles, Riverside, Sacramento, San Francisco, and Stanislaus.

In sum, both health and mental health services are recognizing the need to develop comprehensive, integrated systems of care to provide for the social and emotional needs of young children and their families. Despite the similarities of goals and challenges, these two major systems do not always communicate with each other. New models are now being developed that may eventually result in better inter-agency communication and sharing of services. In the long run, these models may produce a truly comprehensive system that can provide the full range of services to meet the needs of both low and high risk children and their families.

Principles, Strategies and Challenges

Bridging the *cultural differences* between the diverse stakeholders in planning and policy initiatives is a key component to realizing the potential of these efforts. Shonkoff (2000) argues that the different cultures of policymakers, clinicians, and researchers may inhibit their ability to work together. Knitzer (2002) provides a detailed overview of principles that address such issues in developing early childhood systems. Likewise, in the keystone report in the "Building State Comprehensive Systems" series, Halfon et al. (2004) uses bridge-building as a metaphor to show how states can build and link early childhood services from birth through school entry. The report outlines general principles of early childhood systems development, and delineate key strategies that can be used by SECCS grantees as they build their strategic plans.

All of the principles and the strategies described by Knitzer and Halfon et al are relevant for developing IMH services. These strategies can be used at all system levels. This includes engaging multiple state agencies to develop and determine the overall statewide plan (top down), and to starting at a local level, or with a limited, focused, program and growing it into a statewide plan (bottom up). The other option is to develop within one sector (e.g., MCH). Whatever form the growth of a state system takes, bridge-building through strategic planning, relationship building, and communication strategies are necessary to make the initiative grow.

Rather than reiterate those already well-described strategies, **Appendix C** presents two states' efforts at developing comprehensive early childhood services, The examples illustrate that both *bottom up* and *top down* strategies can be effective in developing collaborative, comprehensive systems to address the health and mental health of young children and their families. Such development requires creative anfdstrategic planning efforts across systems, via a "parallel process" (Figure 2). **Figure 4** outlines basic elements and strategies in creating a system of care. A more detailed discussion of strategies that are working across the country to develop services for young children can be found in Knitzer (2001) and Hayes (2004).

Figure 4: Elements in Creating a System of Care

Access	• Infants and their families should be able to *access* services at multiple entry points, including health, educational, and social services. • Use existing pathways for outreach, information dissemination, and services, such as clinics, child care centers, and community centers.
Continuum of Services	• A *continuum of services* ranging from basic prevention to tertiary services is available. • Identify and prioritize the needs of various *at-risk* populations, including those who may need immediate services.
Staff Training	• The current lack of appropriately trained providers negatively affects the availability of needed services and available capacity in all settings. • *Staff should be adequately trained,* and use *best-evidence approaches* for assessment and interventions.
Program Design	• *Cultural, ethnic, and community values* need to be acknowledged and incorporated into any programmatic effort. • *Parents* should be involved in the development of initiatives to ensure their concerns are being addressed.
Partnerships and Collaboration	• Partnerships are needed to provide the type and range of care because emotional and mental health needs of young children and families are often complex and cross traditional care boundries • Leaders who possess expertise (e.g., university experts, mental health and education professionals, existing community programs, child advocates) and those empowered to create change (e.g., state officials) must build and sustain alliances in order to develop programs. • State and local partnerships can work together to: ✓ Provide support, training, technical assistance, materials and other resources to interested parties, other counties, state offices, etc. ✓ Coordinate efforts for personnel and program development ✓ Expand integrated services ✓ Identify effective screening and assessment measures ✓ Provide community education regarding early socioemotional development ✓ Enhance training for heath and mental health professionals ✓ Facilitate increased interdisciplinary interagency collaboration ✓ Evaluate outcomes for children, families, and service providers
Planning and Sustainability	• Top down strategic planning begins at the state level, and includes identifying priorities, establishing outcomes and evaluation techniques, developing effective alliances, and ensuring that the needs of the population are being met. • Bottom up strategies include developing coalitions with local community-based organizations and service providers from sectors involved in providing services to infants and their families, identifying critical gaps and prioritizing local needs, and gaining community investment in early childhood programs. • Leverage funds by collaborating with programs targeting similar problems (e.g., maternal depression, parenting education, early childhood development).

The Number One Challenge: Funding

Some state policy makers may be naïve to the importance of early socioemotional development to later development, and that infants and young children can suffer emotionally or behaviorally. These attitudes can be changed with the current compelling knowledge base in early childhood development. Yet, probably the biggest impediment to program development is access to funding. A number of strategies have been well-described by others (e.g., Johnson & Kaye, 2004; Johnson, Knitzer, & Kaufman, 2002; Hayes, 2003) Provided below is a brief overview of some of the relevant funding issues, and a description of a few states current creative activities.

States have wide discretion in the administration of Medicaid and State Child Health Insurance Programs (SCHIP). States may develop eligibility requirements, define the scope of services covered, and determine how providers are paid. Medicaid funding covers a wide variety of services that target socioemotional development and IMH, ranging from preventive, early intervention (focused), and tertiary services.Examples of services include health care coverage to low-income pregnant women, and infants born to Medicaid-eligible women. This, it is possible to develop a constellation of prenatal and early childhood development services to address not only the monitoring of normal growth and development, but also to provide screening and intervention services for children who need additional services (see **Figure 5**) (Johnson & Kaye, 2004; Johnson, Knitzer, & Kaufman, 2002).

Figure 5: Applications of Funding Early Childhood Mental Health Services through Medicaid

1. Screening for problems with mental, socioemotional, and behavioral development;
2. Enhanced assessment by social workers or child development specialists in pediatric primary care settings;
3. Diagnostic assessment for socioemotional behavioral, and developmental conditions;
4. Family education, training, and support, including home-based professional services;
5. Case management and care coordination, especially for children entering child welfare and foster care systems;
6. Child care consultation for individual children;
7. Individual behavioral health aides to help children remain in early childhood education or school;
8. Relationship-based, parent-child therapy for families at risk, including those in the child welfare system;
9. Therapeutic day treatment in early childhood care and education settings;
10. Wraparound and community support services;
11. Traditional mental health inpatient and outpatient treatment

From: Johnson & Kaye, 2004, p. 11-12; Johnson, Knitzer, & Kaufman, 2002, p. 13.

Despite this potential range of services, a number of potential barriers exist. One problem is the discrepancy between children's and parents' eligibility standards. For example, the child may be enrolled in services by the parent is ineligible. This results in the inability to get services aimed at

parents, such as parent counseling or dyadic therapy. One exception is that health education may be allowed (Rosenbaum, Prosner, Sneider, & Sonosky, 2001).

Medicaid administrators often lack knowledge or experience regarding IMH. Services may lack the appropriate developmental and relationship perspective, or they may focus most heavily on addressing the needs of older children and teenagers. Administrative barriers are related to the separation of health and mental health services. For example, some states

- assign mental health services as the sole responsibility of the state mental health agency, possibly precluding such services being provided through other agencies;
- limit Medicaid mental health reimbursement to designated clinics;
- separate managed care programs for health and mental health services, or
- develop special rules or procedures for mental health services (Johnson & Kaye, 2004, Hayes, 2004).

Additional problems include specific regulations and program requirements that may interfere with coordinated services, and extreme variability in staff training and qualifications (Hayes 2004). Given that states have great latitude to determine how Medicaid funding can be used, and the fact that many IMH services (prevention, screening, and targeted interventions for at-risk populations) are likely to occur outside of traditional mental health systems, it appears that states can and should develop more flexible programs to address the socioemotional needs of young children.

Several states have begun to address these issues through creative and flexible use of state and federal Medicaid dollars. For example, Florida, in a joint effort between state Medicaid and mental health agencies, changed its Medicaid policies to clarify assessment and diagnostic procedures for children ages zero to five. They included child and family (i.e., parent-child) treatment, and broadened the range of reimbursable providers for Medicaid services. In Indiana, state and federal funds were blended to finance and better coordinate Part C early intervention services. In addition, they have begun to work more closely with local planning efforts, and streamlined enrollment procedures. Vermont, in a collaborative effort including Medicaid and the Department of Health, Division of Mental Health, and Division of Child Care Services, is using Medicaid money to finance mental health consultation in child care settings, nurse home visiting, nurse case management programs for children in foster care, therapeutic play groups, and aides for children with serious behavior problems (Johnson & Kaye, 2004; Johnson, Knitzer, & Kaufman, 2002).

In addition to Medicaid and SCHIP, there are other funding sources. Some of these include Part C of IDEA, welfare reform (TANF) funds, and the Substance Abuse and Mental Health Services Administration (SAMSHA) funds. Additional sources include Child Care and Development Fund (CCDF), Maternal Child Health Services Block Grant (Title V), and Social Services Block Grant funds. “Blended” and “braiding” strategies can maximize use of available funds, including the blending of federal and foundation funds(Johnson, Knitzer & Kaufman, 2002). For example funds from SAMSHA and the Casey Foundation supported the Starting Early Starting Smart (SESS) demonstration project (Knitzer 2000).

Funding for tertiary services may be more problematic. The Children's Mental Health Services Initiative (CMHSI) provides funds to develop community-based systems of mental health care for children, but limits services to those with serious emotional or behavioral disturbances—precluding

their availability for prevention and early childhood services. SAMSHA and TANF may be blended with the CMHSI services to provide broader coverage, including integrated services for children and parents.

Johnson, Knitzer, & Kaufman (2002) describe the various federal programs potentially available for funding a range of infant and early childhood mental health services. They emphasize that in many cases there is more room for flexibility than is typically used. In addition, Hayes (2004) provides an in-depth discussion of financing strategies, including optimizing existing resources, maximizing public revenue, creating flexibility in existing funding streams, and building public-private partnerships.

The Number Two Challenge: Workforce Development

Despite the enormous growth in knowledge about developmental psychopathology, early development, and assessment and treatment methods (Zeanah, 2000), IMH training is not yet routinely incorporated into most basic professional training programs. Most child and adult mental health practitioners do not have adequate knowledge or the skills to perform developmentally appropriate, relationship-based assessment and treatment for young children or their caregivers. There is a lack of child mental health professionals in general, and specifically, there is a dearth of child psychiatrists (AACAP, 2003). Access to tertiary IMH treatment from mental health professionals is even more difficult. The availability of advanced practice nurse therapists, child therapists, child psychologists, and child psychiatrists with specialized IMH training is rare. Professionals in non-mental health as well as mental health settings are treating young children and families without adequate structure, guidelines, training, supervision, and support.

The vision for a tiered system of care that addresses IMH presented earlier requires different training needs for different elements in the system. For instance, workforce development needs to address staff in pediatric, child care, and family support settings. Current pediatric residency requirements could be upgraded to provide more focus on child development, a broader understanding of anticipatory guidance topics, awareness of validated and reliable screening tools, and available resources for referral. Similar training could be made available to practicing pediatricians. Likewise, training for new and existing child care workers might improve the students' abilities to create learning environments for children in their care. Training should not only address the knowledge, skills, resources and relationships of center-based caregivers, but include non-center-based providers as well.

The workforce development needs of existing providers in the mental health system include the need to adopt therapeutic approaches that move away from an approach that focuses on the individual to one that focuses on the parent-child dyad. This requires training the new generations of mental health providers in these approaches, as well as retooling the practices of existing providers.

A number of training approaches are developing for non-mental health and mental health provider settings (for example, Fenichel, 1997; Zeanah, Larrieu, & Nagle, 1997). Despite differences in approaches, there is quite a bit of overlap in basic information professionals need when working with young children and their families (Zeanah, Larrieu & Zeanah, 2000). Research is lacking

regarding the best training approaches. Nevertheless, all training should include recognition of the personal and professional values that impact work with families, and professionals and others need opportunities for regular supervision as well as discussion with colleagues about the challenges faced in this work. Professionals and programs also need guidance in providing culturally competent care to diverse populations. Providers must be equipped with the resources to refer parents and children. They must have relationships with these resources to ensure effective communication between parent, provider, and specialist. Without appropriate training and expectations, supports, and resources, providers can become overwhelmed, over-involved, or burned out. State agencies can assist providers by supporting workforce development, service supports, and awareness and relationship-building among community resources.

Finally, planners and administrators involved with the development of a system of IMH services need training to increase their awareness of the complexity of problems impacting the parenting of young children and the caregiver-infant relationship. Lack of awareness may lead to development of quick, simplistic approaches, or reduced-intensity programs. For example, parenting classes may be appropriate services for low- risk families, and their availability should not be reduced (Kitzman, et al, 1998), however, such programs alone are completely inadequate for addressing complex IMH problems.

The Number Three Challenge: Outcomes and Evaluation

There remains a lack of epidemiological information about the number of children in need of direct services. Iindirect estimates, based on level of poverty, exposure to violence, and maternal health and mental health parameters can provide some guidance. For example, studies of adult welfare recipients show a high proportion of serious mental health problems (Knitzer, 2000). Estimates are that 15 to 18 percent of children have developmental or behavioral problems, and up to 25 percent have serious psychosocial problems (U.S. Department of Health and Human Services, 1999). Studies from child care settings indicate that between four and 10 percent of children show significant behavioral or emotional problems (see Raver & Knitzer, 2002; Kupersmidt, Bryant, & Willoughby, 2001; Gross, Sambrook, & Fogg, 1999). Nevertheless, there are no clear indicators, like percent of low birth weight babies or premature deliveries, for how to measure either current need, or determining progress because of programmatic interventions.

We have mentioned a number of the problems for the new field of IMH are mentioned throughout this paper, and many of them complicate examining outcomes. Briefly, they include:

1. Lack of baseline. Such baseline data should include number of children considered at risk for problems (e.g., children of clinically depressed mothers) as well as the number of children currently showing social and emotional problems significant enough to interfere with functioning (e.g., preschoolers removed from child care because of aggression). Until there is a clearer understanding about the scope of the problem, it is difficult to evaluate the impact of services. Furthermore, the data collection system used to establish a baseline should be sophisticated enough to track incidence and prevalence over time, and differentiate between an increase of incidence because of better screening versus and an increase due to other causes.
2. Lack of agreement about diagnosis. Diagnosis of social, emotional, and behavioral problems during infancy and early childhood presents a number of challenges (Zeanah, Boris & Scheeringa, 1997; Carter & Briggs Gowan, 2004). Although there are efforts

underway to provide a systematic and reliable classification for infants (e.g., Task Force on Research Diagnostic Criteria 2003; DC 0-3, 1994), these efforts are not complete, and important questions remain. For example, which developmental deviations or delays are not worrisome? Which ones predict later problems? What happens when there are multiple risk factors, but no behavioral symptoms? Young children cannot wait for the answers to the questions, and services should not wait. It does mean that partnerships between service, funding, and academic entities must work together to systematically examine needs, interventions, and outcomes.

3. Criteria for referrals/acceptance into services are not always well defined. The lack of comprehensive, integrated services is a significant problem. For example, an infant may be able to get therapy for associated speech delay, but the child's caregiver may not be able to get mental health services for her depression. The treatment of the caregivers depression would allow her to interact in a more stimulating manner with her child. In this way outcomes will be limited by the scope of services available.
4. Lack of longitudinal outcome studies. Although many studies show the impact of early experience on later development (see Shonkoff & Phillips, 2000; Zeanah, 2000), more studies are needed to document the effectiveness of screening and intervention programs. Are initial gains sustained? Are there unexpected preventive aspects to the intervention (Zeanah et al., 2001)?
5. Appropriate assessment and treatment requires multiple informants involved with the young child: parents, clinicians, child care staff, preschool staff, medical personnel, and other service providers. Coordinating the information from across systems, as well as putting it together in a coherent manner requires patience, skill, time, and a database system that can manage the information.
6. Broad parameters for determining socioemotional outcomes are not clearly defined, although much attention is now being given to school readiness.

The challenge to state MCH directors with regard to outcomes and performance measurement is to work with their partners in other state and non-governmental agencies to determine need, child and family outcomes, indicators of those outcomes, strategies that will impact those outcomes, and measures of success for these strategies. State MCH programs do not cover the full array of service sectors, nor do they have the internal infrastructure to measure outcomes and systems performance in all of the service sectors. However, state MCH programs do have the authority and infrastructure to capture some health-related indicators relating to child and family outcomes and strategic performance. They also have experience and expertise with data collection that may help its partner agencies improve their data collection activities. Examples of possible outcome and performance parameters are shown in **Figure 6**.

Figure 6: Possible Indicators for Program Evaluation in IMH

Examples of Child and Family Outcomes

- Caregiver report of health behavior and positive parenting practices
- Teacher report of child school readiness at kindergarten entry
- Percent of children who are performing within the normal range for age on standardized measures of motor, language, and socioemotional development
- Decreased prevalence of maternal depression
- Increased family economic self-sufficiency

Examples of System Performance Measures

- Number of providers (i.e., pediatric, ECE and family support) trained in child development, IMH, caregiver counseling, and local resource availability
- Number of caregivers and children who receive developmental, socioemotional, or mental health screening during routine health supervision visits
- Number of caregivers and children successfully referred for additional mental health services
- Number of children/families participating in IMH services (including targeted services such as home visiting programs, substance abuse or domestic violence programs)
- Number of children in high quality child care programs
- Number of child care or early education program with infant mental health consultation
- Parent satisfaction with IMH/socioemotional developmental services

Adapted in part from Early Childhood System Building Tool, December, 2003

An additional challenge for state MCH programs and their partners is to develop and support an IMH infrastructure that is made up of evidence-based programs, and/or programs that are designed to add to the evidence base. State MCH and other agencies involved in planning for the SECCS Initiative should include state and local research and teaching institutions to design, implement and maintain program evaluations. Developing program evaluations that yield an evidence-base require research designs that may include randomized controlled studies, pre- and post-intervention evaluations using standardized and objective measures, and the use of appropriate comparison groups.

As state MCH programs and their partners consider how to design new programs, it is important to look to model programs with a proven history of success; replication at this point in the field of IMH is necessary to continue to develop the solid knowledge base for developing IMH services. Modifying evidence-based programs may be necessary to capture the unique circumstances of a population, culture, and community. However, evidence-based programs may show disappointing results not because they suddenly become ineffective, but because they are inadequately implemented, monitored, and sustained. Policy makers that respond to cost constraints by changing evidence-based programs by providing services less frequently, or with less skilled or fewer practitioners, may cause programs to lose important "elements" tied to effectiveness. The rationale for changing the structure of a program that is evidence-based (for example, using paraprofessionals instead of professionals) should be based on equivalent or alternative evidence that the change will enhance, or at least not undermine the program (Korfmacher, Kitzman, & Olds, 1998; Zeanah et al, 2001).

Recommendations

The following policy recommendations and accompanying strategies reflect the issues discussed throughout this report; many were adapted from the May 2004 Zero to Three Policy Fact Sheet on Infant and Early Childhood Health (Zero to Three, 2004). Further details on additional best or promising practice examples for each of the recommendations can be found in the Zero to Three fact sheet.

1. Integrate Infant Mental Health into all child and family service systems

Enhancing the infant-parent relationship through supportive parenting practices is a hallmark of IMH. Pediatric, early care and education, and family support providers have roles in providing education, conducting assessment, performing interventions, and care management. The provider's role in these categories will vary, depending on their professional level of training, resources, their relationships with parents, and community resources. By utilizing the contributions of each group, state SECCS plans can maximize universally available services that promote social and emotional development, prevent IMH problems, and address problems that do occur. Attention should be given to bringing those children and families that do not access these care providers into the system.

Strategies:

- Build the capacity of existing early childhood systems to address infant mental health and serve more children (e.g., Part C, Early Head Start). This including identifying and addressing systemic difficulties faced by caregivers and children interfacing with early intervention services. Early Head Start is one example of how an existing infrastructure can be utilized to meet the IMH needs of young children.
- Link early intervention programs and public mental health services at the state and local levels. For instance, involve high-level state mental health participation in the development and coordination of early intervention and prevention programs (i.e., participation Part C interagency coordinating council); and encourage cooperation between local mental health and intervention programs (i.e., facilitate referrals between agencies).
- Enhance the capacity of the early childhood system by addressing funding issues. Flexibly utilize existing funding by strategies such as pooling or reallocating funding. Maximize the abilities of EPSDT, SCHIP and Medicaid to fund IMH assessment and intervention services. Johnson et al's (2002) Making Dollars Follow Sense policy paper discusses these and other programs. As part of this series, The Finance Project's report Strategic Financing: Making the Most of the State Early Childhood Comprehensive Systems Initiative (Hayes, 2004) presents multiple financing strategies for early childhood service systems.

2. Assure that mental health disorders in young children and their families are identified early.
This report discusses the importance of screening and assessment tools, several existing tools, the importance of adequate training, and the barriers that exist when providers do not have adequate referral resources.

Strategies:

- Equip early childhood service providers with validated and reliable screening and assessment tools
- Provide training for appropriate use of the tools, and support for addressing identified problems, including information regarding referral services.
- Improve the financing of IMH services by making full and appropriate use of existing diagnostic procedures, tools and billing codes (i.e., Zero to Three's Diagnostic Classification).
- Expand billing options to allow for caregivers and children to receive treatment together.

3. Expand system capacity through workforce development

The ability of the system to respond to the mental health needs of young children and their families depends on how the system is structured and the abilities of the workforce—those providers already in the system, and those that are going through their initial training. Medical, early childhood education, and family support providers need the knowledge, skills and resources to most effectively support early social and emotional development.

Strategies:

- Partner with state, regional, and local universities, colleges, and other training organizations to enhance the training and education of future providers.
- Enhance the knowledge and skills of existing providers through continuing education programs in the most effective strategies to promote healthy development, prevent problems, and treat those that do occur.
- Encourage professional and regional associations to build resource networks and equip providers with information about the resources in their communities, strategies for working collaboratively, and technical assistance for making collaboration possible.
- Build the capacity of caregivers to support their children's social and emotional development through education programs for existing parents, new parents, and people without children
- Provide technical assistance to providers in the form of IMH consultation for pediatric practices, early care and education providers, and family support providers.

4. Assure that young children of highest risk receive comprehensive health and mental health services.

Extremely vulnerable children include those in foster care, children of substance abusing parents, children of parents with severe mental illness, and children exposed to violence (Harden, 2004; Knitzer, 2000; Halfon et al, 2002). Comprehensive programs for this extremely vulnerable population are critical as they are less likely to receive regular health care; often have been seriously mistreated; display behaviors and have conditions that will seriously impede their lifelong learning and life success. Comprehensive programs should address the health service

needs of these families, as well as education and social support. Working closely with judicial systems to ensure the most appropriate outcomes for these young children.

5. Provide access to mental health consultation and support to early childhood education providers.

Early care and education providers (center and non-center based) can serve as early learning opportunities and ways to promote the social and emotional development of young children. Previous recommendations and strategies addressed the role of workforce development, and this recommendation addresses direct involvement of appropriately trained mental health providers in early care and education settings to provide on-site, tailored education, technical assistance, and some services. State MCH programs are well-placed to advocate for such services due to their experiences and success implementing the Healthy Child Care America program.

6. Raise public and professional awareness about the importance of early social and emotional development.

This includes information about the legitimacy of mental health disorders in young children and their connection to the mental health of caregivers. The report in this series Framing Early Childhood Development: Strategic Communications and Public Preferences (Gilliam 2004) provides information about crafting public awareness messages which can be valuable in building constituencies with political muscle, sharing parenting information, and encouraging isolated children and families to engage with the service system.

7. Develop strategies for assessing outcomes and program evaluation.

In order to determine effectiveness of programs, it is important to have baseline data as well as consistent and reliable data regarding outcomes.

Strategies:

- Partner with universities to develop sound methodologies and approaches for program evaluation.
- Partner with other agencies to develop methods of data collection that can reduce redundancy and cost, and can improve understanding of how programs impact problems.
- Replicate well-designed, evidence-based programs; if changes are made to implementation of such programs, carefully evaluate impact.

In sum, IMH can and should be integrated into every aspect of a comprehensive early childhood system. The short and long term results of improving the social and emotional experience of young children impact all aspects of development, and lay the groundwork not only for school readiness, but for later healthy, productive functioning.

Appendix A: Domains of IMH Assessment

Domain	Selected Risk Factors	Assessment Approach
Environmental factors	Poverty Teenage parent Less than 12 years education Social isolation/Unstable living situation	Clinical history, Environmental or Psychosocial screen
Infant factors	Prematurity or low birth weight Chronic or significant health problems Difficult temperament Difficult to regulate (sleep, feeding, emotions) Developmental delay	Clinical history Physical assessment Parent report Developmental screen
Parent/caregiver factors	Unwanted pregnancy History of losses, particularly during pregnancy or other children Past or current mental disorder Past or current domestic violence Substance abuse	Clinical history Psychosocial screen Problem-specific screen
Relationship factors	Caregiver: Lack of warmth or nurturance, Harsh or rough handling/tone of voice Lack of comforting Consistent negative or critical remarks about baby Inappropriate or unrealistic expectations Child: Does not seek comfort, aggressive toward caregiver, Inhibited or unusual interactions, frenetic activity, self-endangering behavior,	Parent report Observations of parent, infant, and parent-infant interactions

Adapted in part from Jellinek, M, Patel BP, Froehle MC (Eds.) (2002). Bright Futures in Practice: Mental Health, Volume 1. Practice Guide. Arlington, VA: National Center for Education in Maternal and Child Health and Zeanah, CH (Ed) (2000). Handbook of Infant Mental Health. New York: Guilford Press.

Appendix B: Two States' Approaches to Developing Comprehensive Infant Mental Health Systems

Louisiana's Early Childhood Supports and Services Program (ECSS)

The Louisiana Office of Mental Health developed the Early Childhood Supports and Services Program (ECSS) with the following two major goals:

1) To develop and implement a model of IMH intervention that can be generalized across the state.
2) To identify and provide supports and services to young children ages zero to five and their families who are at risk for developing cognitive, behavioral, and relationship difficulties.

The program currently is located in six parishes (counties) around the state, and each parish has unique needs, resources, populations, and opportunities. ECSS aims to provide supports and services to promote early brain development and school readiness byy developing local, integrated systems of care, early identification & intervention, and state & local collaboration. A centralized organizational and support staff is located in the state capital; each local program has four main components:

- a *partnership of community stakeholders* that both provide services to clients and serve as a source of referrals into the system;
- *care management*;
- *emergency funds* for basic needs that may be used for purchase of services, items, or other needs that cannot be met by any member of the collaborative team; and
- an IMH *team*.

Partners at the local level are educated about factors that pose a risk for the emotional development of young children. A Risk Assessment Form is used by all partners to guide in the identification and referral process at each partner agency. Once a family is identified and referred into the ECSS program, case management paraprofessionals assist in guiding the family through the system, gather and provide information from/to appropriate partners to arrange assessment, and obtain appropriate resources. Each family is "staffed" by the case management team, which includes the local program coordinator, and participants from local early childhood services including:

- early care and education
- child care cooperatives
- IMH
- primary health care
- public health
- child welfare
- police and juvenile justice
- faith-based organizations
- adult educational/vocational services
- battered women's shelters
- representatives of the local government offices--Office of Citizens with Developmental Disabilities, Office of Addictive Disorders
- representative of the local Children's Coalition

This collaborative network forms a “one-stop shop” for these frequently disenfranchised families, and enables families to meet all potential service providers in an open forum. Agreement regarding the needs and strengths of the child and family, and the development of a partnership for intervention, are the highlights of the mutually derived case-plan for the family. This type of planning is essential for many families where transportation and work issues limit their ability to access multiple service providers. Also with this staffing, the identification of a referral for IMH screening can be made.

The IMH team within the ECSS program is composed of case managers, master’s level therapists, a child psychologist, and a child and adolescent psychiatrist. Many of the child psychiatrists and psychologists have completed specialized IMH training provided through the Tulane Institute of Infant and Early Childhood Mental Health program. IMH clinicians receive ongoing, weekly supervision from the training site, as well as on-site supervision at the clinical site. The IMH assessment includes a multi-informant, multi-site assessment aimed at gaining an informed understanding of the reciprocal behaviors between the dyad as well as the caregiver’s unique perceptions of their child’s personality and relationship with the caregiver (Zeanah & Benoit, 1995). Once assessment is completed, an interdisciplinary case discussion and formulation takes place. Then, a determination is made whether the family desires and could benefit from further clinical service. Besides enrollment in specialized IMH services, other possible outcomes include reassurance that the original concern is resolved, referral to another ECSS component as new problems are identified, or deferral of disposition, as further assessment and information is required. Common referrals include specialized adult mental health services, substance abuse and domestic violence program.

Treatment is based on individual needs and identified problems. Psychotherapeutic interventions may include: parent-infant dyadic psychotherapy, specialized case management, parent support groups, family therapy, behavior modification, pharmacotherapy, individual therapy, or other relevant modes. Treatment may occur in the office, home, or even child care setting, depending on needs of the family.

The program was initially funded by TANF dollars, and efforts are underway to sustain funding through a combination of sources. Evaluation is ongoing to determine whether the program is meeting funder's goals, and also will examine the level of parental competence, self-esteem, stress, partner violence, depression, and other child-oriented developmental goals.

The California Infant, Preschool, and Family Mental Health Initiative

California’s Infant, Preschool & Family Mental Health Initiative (IPFMHI), a California First 5 Children and Families Commission project, funded from 2001-2004 through the Department of Mental Health and coordinated by the WestEd Center for Prevention and Early Intervention (CPEI), extended children’s System of Care services in eight county mental health plans to include services to children birth-to-5 years and their families. IPFMHI furthered the development of a personnel competency model along the continuum of promotion, preventive intervention, and treatment. It also supported the development of new clinical services and a Clinical Services Study in Alameda, Fresno, Humboldt, Los Angeles, Riverside, Sacramento, San Francisco, and Stanislaus counties. Furthermore, IPFMHI supported the training of mental health and other interdisciplinary service

providers in these counties and stimulated interagency and interdisciplinary collaboration within and between county agencies.

In 2004, California First 5 funded the Special Needs Project to address two specific areas—children with disabilities and other special needs and early childhood mental health—through selected Demonstration Sites. First 5-funded IPFMHI activities through the Department of Mental Health will end in 2005, however, lessons learned from this work, including the critical need for relationship-based approaches and practices that promote healthy social and emotional development in young children and families, will continue to be applied through a variety of existing programs and initiatives such as California Early Start (Part C of the Individuals with Disabilities Education Act) Early Care and Education, and School Readiness. Additionally, this work links to a variety of child care and education programs including Early Head Start, Head Start, and Preschool Special Education.

For additional information about IPFMHI, please contact Virginia Reynolds at 916.492-4017.
http://www.wested.org/cs/we/view/pj/207

Appendix C: Bottom up and Top down Approaches to Building Early Childhood Systems of Care

Getting started--from the bottom up.
Over the past five years, Louisiana has seen remarkable growth in it's ability to provide services that address the socioemotional needs of its youngest children and their families. As part of its ongoing efforts to reduce child abuse and neglect, the State Office of Public Health (OPH), Maternal Child Health (MCH) partnered with academic experts in IMH, and began to lay the groundwork for services. The multi-level efforts to develop a system have resulted in collaborations with the State Office of Mental Health (OMH), the development of statewide early childhood initiatives in both OPH and OMH , and statewide planning at the level of the Governor's Children's Cabinet.

The State MCH program initiated efforts at improving socioemotional development with the creation of a 30-hour training in IMH for public health nurses and professionals (Zeanah, Larrieu, and Nagle, 1997). This training aims to increase the knowledge and sensitivity of staff to the importance of early development, recognition of risk factors that impact socioemotional development, and methods for clinic-based assessment and interventions. Shortly after the initiation of the IMH training, *Bright Futures Guidelines for Health Supervision* (Green, 1994) was adopted as the guideline for child health visits, and statewide training took place emphasizing anticipatory guidance and the relationship between the clinician and parent. These efforts triggered growing interest and commitment to developing services that would address more comprehensively those factors that impact early child health and development. It also laid the groundwork for changes that followed.

Sometimes the best way to start the process is to start on a small scale. Knitzer (2001) recommends the first of ten action steps, “Build the vision and get started.” Formal efforts to develop a statewide plan to address IMH issues began with the implementation of the Nurse Family Partnership (NFP) program, initially funded through the State MCH program through Title V funds. The NFP, described earlier, provides nurses to home visit first-time mothers starting in pregnancy and continuing until the baby is two years old. This program has been shown to be successful in decreasing a variety of long standing public health problems including child abuse and neglect, childhood injuries, subsequent pregnancy, and welfare and food stamp utilization. It also increased birth spacing and workforce participation (Kitzman et al., 1997; Kitzman et al., 2000; Olds et al., 1986; Olds et al, 1988; Olds et al, 1997).

Four sites in Louisiana were provided with initial funding, but there was not enough Title V funding to sustain and grow these programs. A growth of these programs was a clear goal when deciding to implement the NFP program. The MCH program turned to Medicaid for sustainable funding, but work was required at the state policy level to ensure the commitment to the program (see Nagle & Wightkin, in press).

In addition, because of the lack of mental health services for children under the age of six years, there was concern that many of the high risk families served by this program with mental health problems severe enough to interfere with progress in the program would not meet criteria for community mental health services. Though the NFP nurses had received training in IMH, this

was not sufficient for them to address the more complex mental health issues they would face. As a result, the MCH program decided to add an IMH consultant to the NFP teams. This was a new, undefined role in maternal child health. MCH contracted with experts at the Tulane Institute of Infant and Early Childhood Mental Health to develop the training and to develop the service model. Although there had been some interest in developing infant mental heath services through the OMH previously, neither the resources nor the commitment had been available. Over time, formal and informal discussions between the two state agencies began to address how the two might collaborate to provide the IMH services to the NFP. Eventually, OMH determined that they wanted to take the administrative responsibility for the four NFP IMH consultants. Currently OPH and OMH work collaboratively in provision of the mental health services to NFP.

In part as a result of these small initial steps, OMH developed the Early Childhood Supports and Services (ECSS) program (**Appendix B**). The crux of the program is the development of a community-based collaboration in which all programs serving young children can refer in to ECSS. Also these programs are willing to receive referrals from ECSS. To date, ECSS is being piloted in six parishes around the state, and efforts are underway to find sustained funding for the program, including Medicaid reimbursement.

A recent development in service provision has been the move of the Part C IDEA early intervention program from the Department of Education to the Office of Public Health. This well-established program provides yet another entrée into developmental services for children. Currently, Part C services are available statewide to those who qualify. Likewise, the NFP program is available in 19 parishes (counties), and ECSS is in six parishes, and only some of which overlap with NFP.

Although there remains much to accomplish before Louisiana has sufficient services for its large number of at-risk children, these efforts have provided a way to get "in." These efforts have generated knowledge and interest in local communities regarding their need and capacity to serve young children. Also, they have impacted positively the thinking and understanding of state level policy and funding decision-makers. The Children's Cabinet serves as the advisory group for the governor regarding services for children and makes recommendations regarding funding priorities. Over the past 3 years, early childhood initiatives have been the top funding priorities for children services.

Top-down strategies

The Assuring Better Child Health and Development (ABCD) initiative, funded by the Commonwealth Fund, was aimed at improving the capacity of states to provide early development services for low-income families. Four states (North Carolina, Utah, Vermont, and Washington) participated in this three-year initiative. Briefly, the initiative resulted in:

- developing new child health services;
- improving screening, surveillance, and assessment;
- improving training and strengthening work force;
- improving reimbursement for developmental services;
- improving collaboration and coordination of care, and developing new educational materials for parents (Pelletier & Abrams, 2003).

Findings from this initiative can guide states as they develop strategies for developing, providing, coordinating and financing early socioemotional development programs (see also Pelletier et al, 2003).

Several states have begun statewide efforts to address the social, emotional, and mental health needs of young children and their families (Johnson, Knitzer, & Kaufman, 2002). For example, Florida developed a strategic plan for addressing early childhood mental health with the broad goal of developing a system to prevent, identify, and treat emotional and behavioral disorders in families with children ages zero to five years. This undertaking was a collaborative effort based out of Florida State University's Center for Prevention and Early Intervention Policy. The advisory committee included representation from state agencies, universities, foundations, community-based providers, judicial system, and others interested in the health and welfare of young children and their families.

Similarly, Vermont has used parallel state and regional planning to develop linkages between parent-child centers, community mental health agencies, Part C early intervention programs, child care services, visiting nurse associations, and other early childhood programs. In addition, the state is developing treatment for behavior problems, as well as consultation approaches for early child care and education systems.

Summary

As shown in the above examples, both bottom up and top down strategies can be effective in developing collaborative, comprehensive systems to address the health and mental health of young children and their families. Such development requires active, well-designed, and creative efforts across systems, whether at the local or state level via a parallel process. **Figure 5** found in the body of the report summarizes some of the strategies that can be used. For more information refer to Knitzer (2001) and Hayes (2004) for a more detailed discussion of strategies that are working across the country to develop services for young children.

Appendix D: Relevant Resources

Center on Infant Mental Health & Development
http://depts.washington.edu/chdd/ucedd/ucedd_infantmentalhealth.html

University of Washington
Center on Human Development and Disability
Box 357920
Seattle, WA 98195-7920
Kathryn Barnard, PhD, FAAN - Director

The National Center for Children in Poverty (NCCP)
http://www.nccp.org/pub_pew.html

215 W. 125th Street, 3rd Floor
New York, NY 10027
Tel: 646.284.9600
Fax: 646.284.9623
E-Mail: info@nccp.org
Jane Knitzer, Ed.D., Director

Tulane Institute for Infant and Early Childhood Mental Health
http://www.infantinstitute.com/index.html

1440 Canal St. TB-52
New Orleans, LA 70112
(504) 988-8241

Zero to Three
Infant Mental Health Resource Center
http://www.zerotothree.org/imh/

National Center for Infants, Toddlers and Families
2000 M Street, NW, Suite 200
Washington, DC 20036
(202) 638-1144

Nurse Family Partnership
http://www.nursefamilypartnership.org/

1900 Grant Street, Suite 750
Denver, CO 80203-4307
Tel: 303-327-4241

National Institute of Mental Health (NIMH)
http://www.nimh.nih.gov/healthinformation/childmenu.cfm

Office of Communications
6001 Executive Boulevard, Room 8184, MSC 9663
Bethesda, MD 20892-9663
E-Mail: nimhinfo@nih.gov
1-866-615-6464 (toll-free)
1- 301-443-8431 (TTY)

Substance Abuse and Mental Health Services Administration (SAMHSA)
Child, Adolescent and Family Branch
http://www.mentalhealth.samhsa.gov/topics/explore/children/

P.O. Box 42557
Washington, DC 20015
1-800-789-2647
Email: http://store.mentalhealth.org/emails/

American Academy of Pediatrics (AAP)
BrightFutures
http://brightfutures.aap.org/web/FamiliesandCommunitiestoolsAndResources.asp

email: Brightfutures@aap.org
1-847-434-4223
Darcy Steinberg, MPH, Director
Laura Thomas, MPH, CHES, Manager

American Academy of Pediatrics (AAP)
Mental Health Task Force

The AAP recently appointed a Mental Health Task Force, with Jane Foy, MD serving as Chairperson. The Task Force was created to help prepare pediatricians with the tools and resources they need in order to provide the best care for children with mental health conditions. Additional information on the Task Force will be available online as activities occur and can be found on the AAP Web site at www.aap.org . Please feel free to contact Anjie Emanuel, Pediatrics Collaborative Care Manager at 800/433-9016 ext. 4739 or aemanuel@aap.org if you have any questions.

References

Aber, L.J., Jones, S., & Cohen, J. (2000). The impact of poverty on the mental health and development of very young children. In C. H. Zeanah, Ed., Handbook of infant mental health, New York: Guilford Press.

Achenbach, T.M. (1992). Manual for the Child Behavior Checklist / 2-3 and 1992 Profile. Burlington, VT: University of Vermont Department of Psychiatry.

American Academy of Child and Adolescent Psychiatry (2003). Work force data sheet.

American Academy of Pediatrics (1997). Guidelines for Health Supervision III. Elk Grove, Village, IL: AAP.

American Academy of Pediatrics (2000). Fellows Survey. Elk Grove Village, IL: AAP.

American College of Obstetricians and Gynecologists (ACOG) (2002). Depression in women. Clinical Updates in Women's Health Care Monographs, 1, 1-82.

Annie E. Casey Foundation (2004). Kids Count Data Book, Annie E Casey Foundation.

Barnard, K.E, Booth, C.L., Mitchell, S.K., & Telzrow, R.W. (1988). Newborn nursing models: A test of early intervention to high-risk infants and families. In E. Hibbs (Ed.), Children and families: Studies in prevention and intervention. Madison, CT: International Universities Press.

Barnard, K.E., Morisset, C.E., & Spieker, S. (1993). Preventive interventions: Enhancing parent-infant relationships. In C.H. Zeanah, Jr. (Ed.), Handbook of infant mental health, (pp 386-401). New York: Guilford Press.

Bowlby, J. (1969). Attachment and loss: Vol. 1. Attachment. New York: Basic Books.

Brazelton, T.B. (1995). Working with families: Opportunities for early intervention. Pediatric Clinics of North America, 42, 1-9.

Bryant, D., Vizzard, L.H., Willoughby, M., & Kupersmidt, J. (1988). A review of interventions for preschoolers with aggressive and disruptive behavior. Unpublished manuscript. University of North Carolina at Chapel Hill, Frank Porter Graham Child Development Center, Maternal and Child Health, Department of Psychology, Chapel Hill, N.C.

Carter, A.S., & Briggs-Gowan, M. (2000). The Infant-Toddler Social and Emotional Assessment (ITSEA). Unpublished manual, University of Massachusetts, Boston, Department of Psychology, Boston, MA. Yale University, New Haven, CT.

Chazan-Cohen, R., Jerald, J. & Stark, D.P. (2001). A commitment to supporting the mental health of our youngest children. Zero to Three, 22, 4-12.

Cohen, L.J. & Slade, A. (2000). The psychology and psychopathology of pregnancy: Reorganization and transformation. In C.H. Zeanah, Ed., Handbook of infant mental health, 2nd Ed., New York: Guilford Press.

Committee for Health Care for Underserved Women (November 1999). Psychosocial risk factors: Perinatal screening and interview. ACOG Educational Bulletin, 224, 1-7.

Cowen, Y. (1996). The enhancement of physical wellness: Challenges and opportunities, American Journal of Community Psychology, 22, 149-179.

Early childhood system building tool draft (December 2003). Women's and Children's Health Policy Center, Johns Hopkins Bloomberg School of Public Health.

Evans, G.W. (2004). The environment of childhood poverty, American Psychologist, 50, 77-92.

Dicker, S., Gordon, E., & Knitzer, J. (2001). Promoting the well-being of children and families policy paper No. 2.: Improving the odds for the healthy development of young children in foster care. National Center for Children in Poverty, Mailman School of Public Health, Columbia University.

Eyberg, S., & Pincus, D. (1999). Eyberg Child Behavior Inventory & Sutter-Eyberg Student Behavior Inventory - Revised. Psychological Assessment Resources, Odessa, FL: Psychological Assessment Rescources.

Fenichel, E. (Ed.) (1997). Pediatric primary care. Zero to Three, 17, whole issue.

Fenichel, E. (Ed.) (2001). Infant mental health and early head start: Lessons for early childhood programs. Zero to Three, 22, whole issue.

Friedman, R.M., & Stroul, B.A. (1986). A system of care for children and youth with severe emotional disturbance (Rev. Ed). Washington, D.C. Childhood and Adolescent Service System Program Technical Assistance Center, Georgetown University Child Development Center.

Garcia-Coll, C. & Meyer, E. (2000). Cultural influences on parenting, in C.H. Zeanah, Handbook of infant mental health, 1st Ed., New York: Guilford Press.

Gilliam, FD. & Nall Bales, S. (2004). Framing Early Childhood Development: Strategic Communications and Public Preferences. In: Halfon N, Rice T, and Inkelas M, eds. Building State Early Childhood Comprehensive Systems, No. 7. National Center for Infant and Early Childhood Health Policy.

Glascoe, F.P. (1997). Parents' Evaluation of Developmental Status: A Method for Detecting and Addressing Developmental and Behavioral Problems in Children. Nashville, TN: Ellsworth & Vandermeer Press Ltd.

Glascoe, F. P. (2000). Early detection of developmental and behavioral problems. Pediatrics in Review, 21, 272-280.

Green, M. & Palfrey, M.S. (Eds.) (2000). Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents, National Center for Education in Maternal and Child Health: Georgetown University.

Greenberg, M.T. (1999). Attachment and psychopathology in childhood, in J. Cassidy & P.R. Shaver, Eds. Handbook of Attachment: Theory, Research, and Clinical Applications, New York: Guilford Press.

Greenhill, L., Jensen, P., Abikoff, H., Blumer, J., DeVaugh-Geiss, J., Fisher, C., Hoagwood, K., Kratochvil, C.J., Lahey, B., Laughren, T., Leckman, J., Petti, T., Pope, K., Rapoport, J., Shafer, D., Vitiello, B., & Zeanah, C.H. (2003). Optimizing strategies for developing and implementing psychopharmacological studies in preschool children. Journal of the American Academy of Child and Adolescent Psychiatry, 42, 406-414.

Gross, D., Sambrook, A. & Fogg, L. (1999). Behavior problems among young children in low-income, urban day care centers. Research in Nursing and Health, 22, 15-25.

Gunnar, M. R., Broderson, L., Machmias, M.C., Buss, K., & Rigatuso, J. (1996). Developmental Psychobiology, 29, 191-204.

Halfon, N. (2002). Social-emotional development, school readiness, and the role of the pediatrician in building community-wide early childhood service delivery systems. In B.S. Zuckerman, Ed., Emotion regulation and developmental health: Infancy and early childhood, Johnson & Johnson Pediatric Institute, L.L.C. 301-318.

Halfon, N. & Hochstein, M. (2002). Lifecourse health development: An integrated framework for developing health, policy and research. The Millbank Quarterly, 80, 433-479.

Halfon, N., Inkelas, M., Flint, R., Shoaf, K., Zepeda, A., & Franke, T. (2002) Assessment of factors influencing the adequacy of health care services to children in foster care. UCLA Center for Healthier Children, Families and Communities.

Halfon, N., Regalado, M., McLearn, K.T., Kuo, A., & Wright, K. (2003). Building a bridge from birth to school: Improving developmental and behavioral health service for young children. Briefing Note. The Commonwealth Fund.

Halfon, N., Yueda, K., Inkelas, M., & Rice, T. (2004). Building bridges: A Comprehensive System for Healthy Development and School Readiness. In Halfon N, Rice T, Inkelas M, eds. Building State Early Childhood Comprehensive Systems Series, No. 1. National Center for Infant and Early Childhood Health Policy, University of California at Los Angeles.

Hardin, B.J. (2004). Safety and stability for foster children: A developmental perspective. The Future of Children, 14, 31-47.

Hayes, C.D. (2004). Strategic financing: Making the Most of the State Early Childhood Comprehensive Systems Initiative. In: Halfon N, Rice T, Inkelas M, eds. Building State Early Childhood Comprehensive System Series, No.5, National Center for Infant and Early Childhood Health Policy,.

Heneghan, A.M., Mercer, M.B., & DeLeone, N.L. (2004). Will mothers discuss parenting stress and depressive symptoms with their child's pediatrician? Pediatrics, 113, 460-467.

Heneghan, A.M., Silver, E.J., Bauman, L.J. & Stein, R.E. (2000). Do pediatricians recognize mothers with depressive symptoms? Pediatrics, 106, 1367-1373.

Inkelas, M & Regalado, M. (Manuscript) Building Community Systems to Promote Medical Home and Integrated Primary Care Developmental Services: Policy and Community-Based Practice Strategies. In: Halfon N, Rice T, and Inkelas M, eds. Building State Early Childhood Comprehensive Systems Series, No. 10. National Center for Infant and Early Childhood Health Policy.

Inkelas, M. et al. (May 4, 2002a). Having a particular clinician for well child care and quality of early childhood health care. Paper presented at Pediatric Academic Societies' Annual Meeting, Baltimore, MD.

Inkelas, M. et al. (May 4, 2002b). National patterns and disparities in parent concerns about child development. Paper presented at Pediatric Academic Societies' Annual Meeting, Baltimore, MD.

Jellinek, M., Patel, B.P., & Froehle, M.C. (2002). Bright Futures in Practice: Mental Health-Volume 1. Practice Guide. Arlington, VA: National Center for Education in Maternal and Child Health.

Johnson, K. & Kaye, N. (2004). Using Medicaid to support young children's healthy development. Portland, ME: National Academy for State Health Policy.

Johnson, K., Knitzer, J., & Kaufmann, R. (2002). Making dollars follow sense: Financing early childhood mental health services to promote healthy social and emotional development in young children. National Center for Children in Poverty, Mailman School of Public Health, Columbia University.

Kaplan-Sarnoff, M., Brown, T.W., Zuckerman, B. (1997). Enhancing pediatric primary care: Cost lessons learned from Pediatric Pathways to Success. Zero to Three, 17, and 34-36.

Kaufman, J. & Henrich, C. (2000). Exposure to violence and early childhood trauma. In C.H. Zeanah, Ed., Handbook of Infant Mental Health, 2nd Ed., New York: Guilford Press.

Kitzman, H.J., Cole, R., Yoos, H.L., & Olds, D. (1997). Challenges experienced by home visitors: A qualitative study of program implementation. Journal of Community Psychology, 25, 95-109.

Kitzman, H., Olds, D. L., Henderson, C. R., Hanks, C., Cole, R., Tatelbaum, R., McConnochie, K. M., Sidora, K., Luckey, D. W., Shaver, D., Engelhardt, K., James, D., & Barnard, K. (1997). Effect of prenatal and infancy home visitation by nurses on pregnancy outcomes, childhood injuries, and repeated childbearing: A randomized controlled trial. Journal of the American Medical Association, 278, 644-652.

Kitzman, H., Olds, D. L., Sidora, K., Henderson, C. R., Hanks, C., Cole, R., Luckey, D. W., Cole, K., & Glazner, J. (2000). Enduring effects of nurse home visitation on maternal life courses: A 3-year follow-up of a randomized trial. Journal of the American Medical Association, 283, 1983-1989.

Knitzer, J. (1982). Unclaimed Children: The failure of public responsibility to children and adolescents in need of mental health services. Washington, DC: Children's Defense Fund.

Knitzer, J. (2001). Building services and systems to support the healthy emotional development of young children: An action guide for policymakers. National Center for Children in Poverty, Mailman School of Public Health, Columbia University.

Knitzer, J. (2000). Promoting resilience: Helping young and parents affected by substance abuse, domestic violence, and depression in the context of welfare reform. National Center for Children in Poverty, Mailman School of Public Health, Columbia University.

Knitzer, J. (2001). Building services and systems to support the healthy emotional development of young children: An action guide for policymakers. National Center for Children in Poverty, Mailman School of Public Health, Columbia University.

Knitzer, J. (1996). Meeting the mental health needs of young children and their families. In B.A. Stroul (Ed.). Children's mental health: Creating systems of care in a changing society (pp.553-572). Baltimore, MD; Paul H. Brooks.

Korfmacher, J., Kitzman, H.J., & Olds, D. (1998). Intervention processes as predictors of outcomes in a preventive home visitation program. Journal of Community Psychology, 26, 49-64.

Kupersmidt, J.B., Bryant, D. & Willoughby, M. (2000). Prevalence of aggressive behaviors among preschoolers in Head Start and community child care programs. Behavioral Disorders, 26, 42-52.

Larrieu, J.A. & Zeanah, C.H. (1998). Intensive intervention for maltreated infants and toddlers in foster care. Child and adolescent psychiatric clinics of North America, 7, 357-71.

Lester, B.M. & Tronick, E.Z. (1994). Prenatal drug exposure and child outcome. Special Issue of Infant Mental Health Journal, 15.

Luthar, S.S., Burack, J.A., Cichetti, D. & Weisz, J.R. (1997). Developmental psychopathology: Perspectives on adjustment, risk, and disorder. New York: Cambridge University Press.

Luthar, S. S. & Suchman, N.E. (1999). Developmentally informed parenting interventions: The Relational Psychotherapy Mother's Group. In D. Cicchetti & S. L. Toth (Eds.), Rochester symposium on developmental psychopathology, Volume X: Developmental approaches to prevention and intervention (pp. 271-309). Rochester, NY: University of Rochester Press.

Marvin, R., Cooper, G., Hoffman, K. & Powell, B. (2002). The Circle of Security project: Attachment-based intervention with caregiver-pre-school child dyads. Attachment and Human Behavior, 4, 107-124.

Mayes, L. (1995). Substance abuse in parenting. In M. Bornstein (Ed.), Handbook of parenting (pp. 101-25). Mahwah, NJ: Erlbaum.

Midmer, D. (Ed.) (1996). The ALPHA Form: Antenatal psychosocial health assessment form, Department of Family and Community Medicine, University of Toronto.

Minkovitz, C.S., Hughart, N., Strobino, D., Scharfstein, D., Grason, H., Hou, W., Miller, T., Bishai, D., Augustyn, M., McLearn, K.T., & Guyer, B. (2003, December 17). Practice-based intervention to enhance quality of care in the first three years of life: Healthy Steps for Young Children Program, Journal of the American Medical Association, 290, 3081-3091.

Nagle, G. A., & Boris, N. W. (2004). Nurse home visiting impact on prenatal maternal depression and partner violence: Preliminary results. Manuscript submitted for publication.

NICHD Early Child Care Research Network (2000). Characteristics and quality of child care for toddlers and preschoolers, Applied Developmental Science, 4, 116-135.

Nygren, P., Nelson, H., & Klein, J. (2004). Screening children for family violence: A review of the evidence for the US Preventive Services Task Force. Annals of Family Medicine, 2, 161-169.

Olds, D. L., Eckenrode, J., Henderson, C. R., Kitzman, H., Powers, J., Cole, R., Sidora, K., Morris, P., Pettitt, L. M., & Luckey, D. (1997). Long-term effects of home visitation on maternal life course and child abuse and neglect: Fifteen-year follow-up of a randomized trial. Journal of the American Medical Association, 278, 637-643.

Olds, D.L., Henderson, C.R., Tatelbaum, R., & Chamberlin, R. (1986). Improving the delivery of prenatal care and outcomes of pregnancy: A randomized trial of nurse home visitation. Pediatrics, 78, 65-78.

Olds, D.L., Henderson, C.R., Tatelbaum, R., & Chamberlin, R. (1988). Improving the life course development of socially disadvantaged mothers: A randomized trial of nurse home visitation. American Journal of Public Health, 78, 1436-1445.

Olds, D.L., Henderson, C.R., Kitzman, H., Eckenrode, J., Cole, R., & Tatelbaum, R. (1998). The promise of home visitation: Results of two randomized trials. Journal of Community Psychology, 26, 5-21.

Olds, D.L. & Korfmacher, J. (1997). The evolution of a program of research on prenatal and early childhood home visitation: Special issue and introduction. Journal of community psychology, 25, 1-7.

Olson, L.M., Inkelas, M., Halfon, N., Schuster, M.A., O'Connor, K.G., & Mistry, R. (2004). Overview of the content of health supervision for young children: Reports from Parents and Pediatricians. Pediatrics, Vol. 113, No. 6, pgs. 1907-1916.

Pelletier, H, & Abrams, M. (2003). ABCD: Lessons from a four-state consortium. Portland, ME: National Academy for State Health Policy.

Pelletier, H. & ABCD Consortium (2003). The ABCD Toolbox: Resources for states seeking to enhance the delivery of early childhood development services. Portland, ME: National Academy for State Health Policy.

Prochaska, J.O., DiClemente, C.C., & Norcross, J.C. (1992). In search of how people change, American Psychologist, 47, 1102-1147.

Raver, C.C. & Knitzer, J. (2002). Ready to enter: What research tells policymakers about strategies to promote social and emotional school readiness among three- and four-year old children. National Center for Children in Poverty, Mailman School of Public Health, Columbia University.

Reems, R. (1999). Children birth to three entering the state's custody. Infant Mental Health Journal, 20, 166-174.

Rosenbaum, S., Proser, Michelle, Schneider, A., & Sonosky, C. (2001). Room to grow: Promoting child development through Medicaid and CHIP. George Washington University Medical Center School of Public Health and Health Services, Center for Health Services Research and Policy.

Rosenfeld, A. A., Pilowsky, D. J., Fine, P., Thorpe, M., Fein, E., Simms, M. D., et al. (1997). Foster care: An update. Journal of the American Academy of Child and Adolescent Psychiatry, 36, 448-457.

Sameroff, A.J. & Emde, R.N. (1989). Relationship disturbances in early childhood. New York: Basic Books.

Sameroff, A.J. & Fiese, B.H. (2000). Models of development and developmental risk. In C. H. Zeanah, Ed., Handbook of infant mental health, 2nd Ed., New York: Guilford Press.

Scheeringa, M., & Gaensbauer, T. (2000). Posttraumatic stress disorder. In C.H. Zeanah, Ed., Handbook of Infant Mental Health, 2nd. Ed., New York: Guilford Press.

Scheeringa, M., Zeanah, C.H., Myers, L. & Putnam, F. (2003). New findings onalternative criteria for PTSD in preschool children. Journal of the American Academy of Child and Adolescent Psychiatry, 42, 561-570.

Seifer, R. & Dickstein, S. (2000). Parental mental illness and infant development. C.H. Zeanah, Ed., Handbook of infant mental health, 2nd Ed., New York: Guilford Press.

Shaw, D.S., Gilliom, M., Giovannelli, J. (2000). Aggressive behavior disorders, in C.H. Zeanah, Ed., Handbook of infant mental health, 2nd Ed., New York: Guilford Press.

Shonkoff, J. P. (2000). Science, policy, and practice: Three cultures in search of a shared mission. Child development, 71, 181-187.

Shonkoff, J.P. & Meisels, S.J. (2000). Handbook of early childhood intervention, 2nd Edition. New York: Cambridge University Press.

Shonkoff, J.P. & Phillips, D. (2000). From neurons to neighborhoods: The science of early childhood development, Washington, DC: National Research Council, Institute of Medicine.

Smyke, A., Wajda-Johnston, V. & Zeanah, C.H. (in press). Working with young children in foster care. In J.D. Osofsky (Ed.), Traumatized Children. New York, Wiley & Sons.

Squires, J., Bricker, D., Twombly, E. Yockelson, S., & Kim, Y. (1996). Behavior-Ages and Stages Questionnaires, Eugene: University of Oregon, Center on Human Development.

Squires, J., Bricker, D. (1999). Ages and Stages Questionnaires, 2nd Ed., Paul H. Brookes Publishing Co.: Baltimore, MD.

Squires, J. Bricker, D. & Twombly, M.S. (2002) Ages and Stages Questionnaires: Social-Emotional. Paul H. Brookes Publishing Co.: Baltimore, MD.

Stadtler, A.C., O'Brien, M.A., & Hornstein, J. (1995). The Touchpoints model: Building supportive alliances between parents and professionals. Zero to Three, 16, 24-28.

Task Force on Research Diagnostic Criteria: Infancy and Preschool (2003). Research Diagnostic criteria for preschool children: The process and empirical support. Journal of the American Academy of Child and Adolescent Psychiatry, 42, 1504-1512.

U.S. Department of Health and Human Services (1999). Mental Health: A Report of the Surgeon General Executive Summary. Washington, DC: Author.

U.S. Department of Health and Human Services. (2000). Report of the Surgeon General's Conference on Children's Mental Health: A National Action Agenda. Washington, DC: Author.

U.S. Preventive Service Task Force (2004). Screening for family and intimate partner violence: Recommendation statement. Annals of Internal Medicine, 140, 382-386.

Van den Boom, D. C. (1994). The influence of temperament and mothering on attachment and exploration: An experimental manipulation of sensitive responsiveness among lower class mothers with irritable infants. Child Development, 65, 1457-1477.

Wallach, V. A. & Lister, L. (1995). Stages in the delivery of home-based services to parents at risk of child abuse: A Healthy Start Experience. Scholarly Inquiry for Nursing Practice: An International Journal, 9, 159-73.

Wilkinson, D.S. Korenbrot, C.C., Greene, J.A. (1998). A performance indicator of psychosocial services in enhanced prenatal care of Medicaid-eligible women. Maternal and Child Health Journal, 2, 131-143.

Winnicott, D.W. (1965). The maturational process and the facilitating environment: Studies in the theory of emotional development. New York: International Universities Press.

Yoshikawa, H., & Knitzer, J. (1997). Lessons from the field: Head Start mental health strategies to meet changing needs. New York: National Center for Children in Poverty, Columbia University School of Public Health, and American Orthopsychiatric Association.

Zeanah, C.H. (Ed.) (2000). Handbook of infant mental health, 2nd Ed., New York: Guilford Press.

Zeanah, C.H. (2000a). Disturbances of attachment in young children adopted from institutions. Journal of Developmental and Behavioral Pediatrics, 21, 230-236.

Zeanah, C.H. & Benoit, D. (1995). Clinical applications of a parent perception interview. In: K. Minde (Ed.), Infant Psychiatry, Child Psychiatric Clinics of North America. Philadelphia, W.B. Saunders, pp. 539-554.

Zeanah, C.H., Boris, N. & Scheeringa, M. (1997). Psychopathology in infancy. Journal of Child Psychology, Psychiatry and Allied Disciplines, 38, 81-99.

Zeanah, C.H., Larrieu, J.A., Heller, S.S., Valliere, J., Hinshaw-Fuselier, S., Aoki, Y. &Drilling, M. (2001). Evaluation of a preventive intervention for maltreated infants and toddlers in foster care. Journal of the American Academy of Child and Adolescent Psychiatry, 40, 214-221.

Zeanah C.H., Mammen O., & Lieberman, A. (1993). Disorders of attachment. In, C.H. Zeanah (Ed.) Handbook of Infant Mental Health. New York, Guilford Press, pp. 332-349.

Zeanah, C.H. & Zeanah, P.D. (2001). Towards a definition of infant mental health. Zero to Three, 22,13-20.

Zeanah, P.D., Larrieu, J.A., & Nagle, G.A. (1997). Infant mental health: A training program for public health nurses, (Unpublished training manual, New Orleans, LA: LA Office of Public Health).

Zeanah, P.D., Larrieu, J.A., & Zeanah, C.H. (2000). Training in infant mental health. In C.H. Zeanah, Ed., Handbook of infant mental health, 2nd Ed., New York: Guilford Press.

Zepeda, M., Varela, F., & Morales, A. (2004). Promoting positive parenting practices through parenting education. Building State Early Childhood Comprehensive System Series, No. 9., National Center for Infant and Early Childhood Health Policy, University of California at Los Angeles.

Zero to Three. (1994). Diagnostic classification of mental health and developmental disorders of infancy and early childhood, Washington, DC: Zero to Three.

Zero to Three. (2001). Definition of infant mental health. Infant Mental Health Task Force Steering Committee.

Zero to Three (May 18, 2004). Fact Sheet: Infant and early childhood mental health, Promoting healthy social and emotional development. Washington DC: Zero to Three.