

---

# **Developing an Early Childhood Outcomes System for OSEP: Key Considerations**

---

*Submitted by:*

Deborah (Montgomery) Parrish  
Gabriele Phillips  
American Institutes for Research

*Submitted to:*

U.S. Department of Education  
Office of Special Education Programs

December 15, 2003



## **Disclaimer:**

This report was developed by the American Institutes for Research for the U.S. Department of Education, Office of Special Education Programs (OSEP). It was created to provide OSEP with information regarding child and family outcomes. The report does not necessarily reflect the views of OSEP.

## **Acknowledgments**

Thanks are extended to the following staff for their significant contributions in the creation of this report:

Jennifer Anthony  
Diana Doyal  
Phil Esra  
Cheryl Graczewski  
Tassie Jenkins  
Amy Merickel  
Carmella Schaecher  
Hemmie Wang



# Table of Contents

<a href="#">Introduction</a> .....	1
<a href="#">Child Outcomes and Indicators</a> .....	1
<a href="#">Child Outcomes: Measurement Tools</a> .....	5
<a href="#">Family Outcomes and Indicators</a> .....	7
<a href="#">OSEP-related</a> .....	7
<a href="#">Research Groups</a> .....	7
<a href="#">State-Level Efforts</a> .....	7
<a href="#">Extant Family Topic Areas and Emerging Themes</a> .....	8
<a href="#">Suggested Revisions for the Family Outcomes and Indicators Recommended by Participants of the 2003 OSEP-sponsored Focus Group</a> .....	12
<a href="#">Family Outcome Measurement Tools</a> .....	14
<a href="#">Summary of Annual Performance Reports</a> .....	14
<a href="#">Feedback from Part C and Section 619 Coordinators</a> .....	15
<a href="#">California</a> .....	16
<a href="#">Connecticut</a> .....	19
<a href="#">Colorado</a> .....	21
<a href="#">Delaware</a> .....	22
<a href="#">Kentucky</a> .....	24
<a href="#">Oregon</a> .....	25
<a href="#">Key Considerations in Developing the Early Childhood Outcomes System</a> .....	26
<a href="#">General Considerations</a> .....	26
<a href="#">Considerations Related to Child Outcomes</a> .....	30
<a href="#">Considerations Related to Family Outcomes</a> .....	32
<a href="#">Overview of Appendices</a> .....	33
<a href="#">Bibliography</a> .....	35

## List of Appendices

- Appendix A: Child Outcome Standards
- Appendix B: Child Outcome Domains, Comparisons Across Five Systems
- Appendix C: Child Outcome Measurement Tools
- Appendix D: Summary of Nine Family Outcome Systems
- Appendix E: Family Outcome Measurement Tools
- Appendix F: 2003 APR Summary Table



## **Introduction**

The Government Performance and Results Act (GPRA), which was passed in 1993 and applies to all Federal agencies, requires that a set of indicators be established in order to judge the effectiveness of programs in meeting their identified goals. OSEP has established GPRA indicators for all IDEA programs, including Parts B, C, and D that are reported to Congress annually. In addition, OSEP tracks other measures, or OSEP indicators, for planning purposes. Development of indicators and data collection processes for the school-age population is further along than for early childhood. Therefore, OSEP is establishing an Early Childhood Outcomes Center to assist them in determining the impact of early childhood programs on children from birth to five with disabilities and their families.

This report summarizes the tasks conducted by the American Institutes for Research (AIR) to support OSEP in the development of the Early Childhood Outcomes Center by providing a synthesis of information and recommendations on child and family outcomes measurement. These tasks include compilation of child and family outcomes, indicators, and instrument matrices; review of state reports and existing early childhood outcome systems; collection of input from state Part C Coordinators, Section 619 Coordinators, and other key stakeholders in the fields of early childhood and early childhood special education; and development of recommendations and considerations that will inform the work of the Early Childhood Outcomes Center.

As part of the groundwork for the Early Childhood Outcomes Center, OSEP convened a focus group on January 27-28, 2003. The purpose of the meeting was to identify child and family outcomes, performance indicators, and assessment methodologies to measure progress of children birth through five years of age who are served under IDEA-Part C and IDEA-Part B. Twenty-two key stakeholders participated in the two-day meeting, and were divided into two small groups, child outcomes and family outcomes, to work towards the goals of the meeting within each area. A focus group report summarizing the findings of the meeting was developed by AIR staff.

## **Child Outcomes and Indicators**

Participants in the OSEP-sponsored January 2003 focus group recommended a set of “core areas” for child outcomes and indicators: literacy, language/communication, math, social/emotional, movement/physical, and adaptive. To assist OSEP in developing a set of outcomes and indicators in these core areas, AIR first reviewed the current child outcome standard systems<sup>1</sup> being developed or implemented by state governments, federally-funded

---

<sup>1</sup> Child outcome standards are the criteria for students’ knowledge and skills (Lund et al, 2002). They represent the essential content and skills children need to know and be able to do in order to have a basis for understanding a subject or making developmental progress. To the extent possible, we have attempted to use this definition when identifying systems or frameworks to include in the Child Outcome Standards table. For the purposes of this report we have also used the word “system” to generally describe documents, policies, and procedures related to child or family outcomes.

programs, non-profit agencies, and research groups. Appendix A includes the table “Child Outcome Standards”, which summarizes child outcome standards being implemented by 30 states, as well as the outcomes included in the Head Start Child Outcomes Framework, the Early Childhood Research Institute on Measuring Growth and Development (ECRI-MGD), the Ounce Scale Assessment System, the Work Sampling System (WSS), and Educational Outcomes and Indicators for Early Childhood (Age 3), National Center on Education Outcomes (NCEO).

The Child Outcome Standards table summarizes key characteristics of each system: its stated purpose,<sup>2</sup> the age range of children served, the domains or constructs included, alignment with other child outcome standards, information regarding assessment tools (if any), and issues related to the inclusion of children with disabilities. The table is based on an extensive search of current research literature, non-profit advocacy/research groups (e.g., Zero to Three, NAEYC), and state and federal agencies related to early childhood education and special education for young children. The table indicates that many state-developed child outcome standards measure similar constructs. For example, the vast majority of states are addressing areas typically measured in child development, including social-emotional, cognitive, and physical domains. Despite similarity in the general core areas of child development, systems differ in regard to their wording of specific indicators and measures (see Appendix B for a more detailed comparison of the domains included in four child outcome standard systems, mapped against the proposed OSEP child outcome core areas).

Of the 30 state systems displayed in the Child Outcome Standards table (Appendix A), 15 include some language related to children with disabilities. Three states include adaptations and accommodations within their framework or have a parallel system for children with disabilities (Arkansas, Louisiana, California). Nine state systems include some reference to adaptations or modifications (Arizona, Colorado, Connecticut, Main, Ohio, Oklahoma, Texas, Vermont). Three states (Florida, Idaho, Massachusetts) include less specific language (e.g., “the system is designed for all children”). It should be noted, however, that this information was gathered primarily through public documents accessible via the states’ websites, and other Internet resources and recent research reports (e.g., Project SPARC). Procedures and policies regarding how state outcome systems coordinate with Part C and Section 619 programs may exist in internal state documents or be in development.

Examples of state-developed child outcome standards designed to be inclusive of all children include California’s Desired Results for Children and Families project, which identifies performance indicators at successive levels of development for all children, using a universal design. The California Department of Education, Special Education Division, has been working in collaboration with the Child Development Division from the beginning of the Desired Results project to develop adaptations and accommodations for children with disabilities, so that *all* children from birth to five years can be assessed using the identical set of measures. Arkansas’ outcomes document includes suggested strategies and activities for some of its developmental benchmarks that are specific to children with special needs. Many states’ outcome systems indicate that they are intended to be inclusive of all children, but do not provide specific strategies for inclusion.

---

<sup>2</sup> To the extent possible, the stated purpose was excerpted directly from the source materials.



The Child Outcome Standards table in Appendix A also describes if and how each system is aligned with other child outcome-related efforts, including K-12 content standards. A number of states, such as Connecticut, Delaware, and Florida, have developed child outcome standards that align with the Head Start Child Outcomes Framework. Other states have referred to Connecticut's Preschool Curricular Goals and Benchmarks when developing their own systems. In addition, some states (e.g., Arkansas, California, Georgia, and Louisiana) have required statewide use of specific measurement tools (e.g., the Developmental Rating Scale in Arkansas, the Desired Results Developmental Profile in California, and portfolios in both Georgia and Louisiana), while other states (e.g., Massachusetts and Mississippi) allow local programs to use self-selected measurement tools to document children's progress towards specified outcomes.

While the Child Outcome Standards table provides a broad overview of major outcome systems being implemented across the country, the set of tables in Appendix B (Child Outcome Domains, Comparisons Across Five Systems) provides a more detailed comparison of four selected systems by domain areas. These tables provide a crosswalk between each of the "core areas" or domains of early childhood outcomes and indicators identified by the participants of the 2003 OSEP-sponsored focus group (*literacy, language/communication, math, social/emotional, movement/physical, and adaptive*) and the domains included in the following four child outcome frameworks: California's Desired Results for Children and Families, the Connecticut Framework: Preschool Curricular Goals and Benchmarks, the Head Start Child Outcomes Framework, and the work of the ECRI-MGD. A table is presented for each domain area, indicating the basic constructs that each system includes within that domain. The four child outcome standards presented in these tables represent how some of the current child outcome standard systems compare to the proposed OSEP core areas and to each other. The four systems were selected as examples of work conducted at both the state and national level.

In general, these four selected systems appear to be measuring a similar set of constructs (in varying levels of detail), with minimal gaps across them.<sup>3</sup> In the *literacy* and *math* domains, all four of the frameworks measure the same basic constructs. In the *language/communication, movement/physical, and social/emotional* domains; one or more of the frameworks do not include measures included in the other systems: 1) the ECRI-MGD does not include a *language comprehension* measure in its framework; 2) both the OSEP focus group report and the Connecticut Framework do not include a *safety/safe behavior* measure in their frameworks; and 3) the ECRI-MGD does not include *self-awareness* or *self-concept* measures in their framework. In addition, the proposed OSEP core areas do not include constructs related to science, art/creative expression, or interest in learning/motivation which do appear in many state outcome systems (Delaware, Oklahoma, Rhode Island, and Wyoming)<sup>4</sup>. The Head Start outcomes framework and the Work Sampling System also include these three additional domain areas.

---

<sup>3</sup> It is important to note that while systems may be measuring similar constructs at a broad level, the indicators and measures that are used may vary widely in their level of detail. For instance, the ECRI-MGD measures are fairly broad, as they apply to birth to eight-year-olds, while the California Desired Results system is being revised to specify levels of development within each theme (or sub-domain) for children from birth through 2 years, 3 years through prekindergarten age, and kindergarten through 12 years of age.

<sup>4</sup> Eighteen of the 30 states for which we have data include science among their listed outcome domain areas, 17 include the arts or creative expression, and 7 include a domain related to approaches toward or interest in learning.

## Child Outcome Findings from the Interagency Outcomes Project

A comparative analysis of domain areas included in a selected set of child outcome systems provides one tool to explore alignment issues between the six “core areas” identified by the OSEP-sponsored focus group and state-level and national frameworks. The identification of critical child outcomes and indicators for children with disabilities can build upon the commonalities across existing systems. A recent research study, the Interagency Outcomes Project, conducted by staff at the Frank Porter Graham Child Development Institute at the University of North Carolina at Chapel Hill also reflects efforts to identify critical outcomes to measure in early intervention programs.

In addition to areas of traditional child assessment, researchers from the Interagency Outcomes Project have made recommendations for child outcomes and indicators in other domains. The goal of the Interagency Outcomes Project was to identify desired child, family, and system outcomes of inter-agency, coordinated early intervention services. In a report titled “Identifying Desired Outcomes of Early Intervention”, the authors (Harbin, Kameny, Pelosi, Kitsul, and Fox, July 2002) describe a three-stage process to develop a comprehensive list of outcomes and then build consensus regarding outcomes considered most important by all relevant stakeholders<sup>5</sup>. This process involved focus groups with seven different stakeholder groups and the identification of a non-duplicative set of items. In a subsequent survey to the stakeholder groups, respondents rated each outcome on its relative importance using a four-point scale.

All but two of the 21 child outcomes included on the survey received a mean rating of 2.5 (with a rating of “3” reflecting the highest rating of “very important”). The three child outcomes considered most important fell into the same category of *Child Well-being* and included *possession of a positive self esteem, living in a stable and safe home, and basic needs met*. Survey respondents rated the broad child outcome categories, from most to least important: *Child Well-being, Child Success, Community Inclusion, Child Competence, Child Relationships, and Prevention*. Within the *Child Competence* category, the highest rated child outcome was *child potential is being maximized*. The report states, “Taken together, they [the ratings] suggest that overall, participants felt it was most important that children have a strong sense of well-being (healthy, safe environment, basic needs met, and feel good about self), be a part of the community, and not be removed from their home and community. Most importantly, these outcomes were thought to be more important than the developmental competence of the child.”

The report concludes by stating “All child outcomes were rated at 2.16 or higher on a 3.0 point scale, while ten of the child outcomes were rated at, or above, 2.71. Such high ratings for all child items indicate that programs should focus on a wide array of child outcomes- not just child competence. This is contrary to the primary focus of most of the current intervention activities, which primarily focus on assisting the child to develop skills in the traditional developmental domains (cognitive, language, etc.).”

---

<sup>5</sup> Stakeholder group members included national experts, policy makers, state and national training and technical assistance staff, local program administrators and service providers, and parents of children with disabilities.

## Summary

The list of six “core areas” recommended by the OSEP-sponsored focus group is comprehensive of common child assessment domains, which typically include one or more aspects of cognitive and social-emotional growth. Input from reviewers for this report suggests that the inclusion of these domain areas in addition to movement/physical and adaptive domains is necessary and appropriate. However, a review of existing systems and recent research in this area suggests consideration of other constructs such as the arts/creative expression, science, approaches to/interest in learning, as well as domains identified by researchers from the Interagency Outcomes Project (e.g., child well-being). Other reviewers suggest that “conventional knowledge” (i.e., name, address, phone number, colors, shapes, etc.) and “social knowledge about the community” should also be considered to broaden the two cognitive domains of early literacy and math that were recommended by participants in the OSEP-sponsored January 2003 focus groups. These additions are considered important in light of the potential that outcomes and indicators are what drive instruction at the classroom level. As one reviewer comments, “Narrow indicators can lead to a narrowly focused curriculum.” Others emphasize the “challenge to link ‘core areas’ for outcomes and indicators to quality curriculum and [inclusive] service delivery models.” Most reviewers emphasize in a variety of ways the goal of “curriculum embedded assessment,” where outcomes and indicators in early childhood appropriately link to quality and developmentally appropriate instruction. A more detailed discussion regarding key considerations for the broader child outcomes system is included later in this report.

## Child Outcomes: Measurement Tools

Appendix C includes the table “Child Outcome Measurement Tools” and displays a list of available instruments related to child outcomes. While this list is not intended to be exhaustive, it reviews a selected set of instruments and is organized into three major sections: 1) tools that measure one of the six core areas of child development identified by the OSEP-sponsored focus group, 2) “comprehensive” instruments currently in use by states or other entities that assess one or more of the core areas, 3) assessments that are not recommended due to concerns about their technical adequacy, and 4) instruments that are intended to diagnose children with disabilities or screen children for advancement to preschool or kindergarten.

For all domains except *adaptive* and *movement/physical*, the set of tools listed in the first section were recommended by participants in a 2002 workshop sponsored by the National Institute of Child Health and Human Development in collaboration with the Administration for Children, Youth, and Families, and the Assistant Secretary for Planning and Evaluation in the Department of Health and Human Services (USDHHS, 2002). The focus of the workshop was to critically examine the state of the art in child outcomes assessment, with a particular focus on assessing these outcomes in large-scale and intervention studies. The workshop participants categorized instruments into three tiers based on their technical qualities. The table includes those tools intended for children birth to five (or a subset thereof) that the workshop participants classified as “Tier 1” (most highly recommended) or “Tier 2” (less recommended).<sup>6</sup> The tools are listed in

---

<sup>6</sup> According to the workshop summary, Tier 1 instruments “[are] required for inter-study comparison; published and widely used; well-normed; valid and reliable; sensitive to instruction or intervention; typically require minimal training and not labor-intensive; may include measures for more in-depth assessment;” Tier 2 tools “[are] less frequently used; standardized and generally psychometrically sound; could be useful depending on the context, but

the same order put forth by the workshop participants with footnotes indicating their Tier 1 or 2 status. The workshop participants did not review assessments of the *adaptive* and *movement/physical* domains. Given that assessments of the *adaptive* domain may be of special interest to OSEP, a set of such instruments are included.<sup>7</sup> In addition, while the first section does not include tools that specifically focus on measuring the *movement/physical domain*, a majority of the instruments that are listed in the comprehensive section include measures of this domain. The following characteristics of each instrument listed in the first part of the Child Outcomes Measurement Tools table are summarized: the stated purpose; how the instrument is administered and the method of data collection; its cost; the age range assessed; its applicability for use with children with disabilities; and strengths and concerns related to the tool, as available. Web links are also included.

Similar information is included in the second section of the table. In addition, this section describes each instrument's use in states or other entities, the domains assessed as described by the instrument developers, and the core areas recommended by the OSEP-sponsored focus group to which these domains can be related. An effort was made to include only tools intended to measure children's developmental progress over time in this section of the table, rather than those that screen children for disabilities or assess their school readiness.

The third section of the table lists instruments by core area that the USDHHS workshop participants identified as "not recommended" due to concerns about their use in research on the efficacy of early childhood programs (2002). Finally, the table's fourth section includes diagnostic and screening tools. This fourth group of instruments are presented separately from the other measurement tools because their purpose may not align with the needs of the OSEP Child Outcome system.

While these instruments cover a wide range of developmental domains, it may not be possible to identify an existing child assessment tool that is appropriate both for OSEP's purposes (i.e., covering the desired domains) and for the population of children birth to five with disabilities. After careful consideration of existing instruments for their appropriateness to California's Desired Results system, the CDE opted to invest time and resources in the design and thorough development (including extensive field-testing) of a tool that meets the state's needs and is also seen as appropriate in guiding curriculum, instruction, and program quality improvement. Key to the success of California's and other system initiatives to move toward an emphasis on measuring the results desired from the service delivery system, has been the involvement of stakeholders at all levels (including parents, program staff, state administrators, researchers, and theorists) throughout the entire process. The involvement of end-users from the beginning of the decision making process and the investment of time and resources to carefully weigh options against anticipated (and unanticipated) results will help to ensure that the final instrument or instruments that are selected or developed are maximally useful and beneficial to all involved.

---

less recommended; some observational measures may require high levels of training and/or be more labor-intensive; includes measures useful for more in-depth assessment within domains or for focused intervention" (USDHHS, 2002).

<sup>7</sup> The instruments listed were reviewed in a recent chapter by Horn and Childre (2004, in press) on assessment of young children with special needs; however, the authors do not evaluate the technical quality of these instruments.

## **Family Outcomes and Indicators**

AIR staff conducted a literature review of family outcome systems for families with young children served under IDEA. Researchers have shown, over the past 15 years, that effective early intervention and preschool programs for children with disabilities not only support children, but also support their families. Although “family-centered” services are now intended to be widely implemented across states, prompted by the increasing focus on accountability-based systems of assessment, researchers and state evaluators have only recently begun to come to consensus on the identification of specific family-related benefits or “outcomes” of such programs. There has been relatively less discussion regarding how family outcomes are best measured.

This report focuses on nine family outcome frameworks<sup>8</sup> that have been developed by varied sources, including OSEP-related focus groups and consortia, research groups, and state-level efforts. These include:

### **OSEP-related**

- Family outcomes and indicators recommended by the January 2003 OSEP focus group participants
- GPRA and OSEP Performance Measures for IDEA
- Family Measures, State Part H Evaluators’ Consortium

### **Research Groups**

- Family Outcomes in a Growth and Development Model (ECRI-MGD)
- Educational Outcomes and Indicators for Early Childhood (Age 3), National Center on Education Outcomes (NCEO)
- Family Outcomes in National Early Intervention Longitudinal Study (NEILS)

### **State-Level Efforts**

- California Desired Results for Children and Families
- Revised California Access Desired Results for Children and Families

---

<sup>8</sup> For the purposes of this chapter, “frameworks” is the general term used to describe the family outcome-related content contained in these nine resources.

- Connecticut Part C Child and Family Outcomes for Local Early Intervention Programs, and Birth to Three System
- Measurable Indicators of Initial and Intermediate Outcomes, Indiana First Steps Statewide Evaluation Systems

Because the frameworks were identified from such varied sources, they range greatly in their organization, scope, and depth. Overall, however, these frameworks represent leading ideas in the area and include concrete efforts to identify and measure the types of family outcomes expected from early childhood special education service systems.

Though effort was made to include all extant outcome frameworks that have been developed for the families of children with disabilities, because of the early stages of development in the field, it is likely that additional frameworks exist. This list therefore does not represent an exhaustive list of family outcome frameworks, but serves as a representative sample of approaches to assessing family outcomes that have emerged in the field.

This section provides a summary of family outcome topic areas and overall themes that AIR staff identified across the nine family outcome frameworks. Based on this summary, we also provide a discussion of the themes and topic areas that overlap with the list of outcome areas and indicators proposed by stakeholders attending the OSEP-sponsored family outcomes focus group in January 2003, and suggest a refined list of family outcome areas and indicators. Finally, we present a table listing available measurement tools for assessing family outcomes (Appendix E).

### Extant Family Topic Areas and Emerging Themes

Because of variability in the nine family outcome frameworks, it is challenging to draw direct comparisons between them. (For a full listing of the family outcomes and outcome areas identified in each framework, see Appendix D). For example, the State of Indiana has developed a comprehensive evaluation system for its early intervention services that includes family outcomes, indicators, and measures (See excerpt presented in Table 1).

**Table 1. Indiana First Steps Statewide Evaluation System**

Family Outcome	Indicator	Measure
<b>Outcome #4:</b> Families participate as members of the early intervention team and carry out recommendations that help them to help their child	Families know about the roles and actions they can take as members of their family's early intervention team.	Number and percent of families who can identify the major roles and actions they can take as members of their family's early intervention team

Excerpted from *Indiana First Steps Statewide Evaluation Systems (2001)*.

Another approach taken by researchers for the National Early Intervention Longitudinal Study (NEILS) was to propose a set of outcome areas and evaluative questions to be addressed by the

longitudinal study, based on a literature review and family focus groups (See excerpt presented in Table 2).

**Table 2. National Early Intervention Longitudinal Study**

Family Outcome Area	Evaluative Questions (based on telephone interviews with families on child and family characteristics, child functioning, families' perception of services)
Family Perceptions of the Early Intervention Experience	<ol style="list-style-type: none"> <li>1. Does the family see early intervention as appropriate in making a difference in their child's life?</li> <li>2. Does the family see early intervention as appropriate in making a difference in their family's life?</li> <li>3. Does the family have a positive view of professionals and the special service system?</li> </ol>

Excerpted from *Family Outcomes in Early Intervention, a Framework for Program Evaluation and Efficacy Research* (See Bailey et al., 1998)

Because the frameworks vary greatly in approach, format, and detail, rather than attempt a side-by-side comparison, AIR staff compiled a summary list of **topic areas** that are common across the nine frameworks and grouped them by **emerging themes** (Table 3). A review of the outcomes across the nine systems indicates how different sources have worded outcome statements (e.g., ranging in specificity or level of measurable language). This variation at the indicator level is an important area for further consideration by OSEP in developing early childhood outcomes, particularly in its attempt to align with existing state systems.

The topic areas are *not* a list of outcomes themselves—which by definition are stated as goals or desired results—but rather describe the subject areas touched on, in any number of ways, in outcome statements by one or more of the frameworks. The “emerging themes” (i.e., family support, family capacity, family involvement, family quality of life, and family hope) group related topic areas into broad categories of family outcomes. These themes are structurally similar to the developmental domains that are well established for child outcomes (e.g., social-emotional, literacy, math, language/communication, movement/physical, and adaptive). Although the field has yet to come to consensus in identifying critical family outcome domains, this list of emerging themes may help OSEP to identify possible domain areas.

It is important to note, that our intention with the summary table in Table 3 is to provide a sense of the breadth of existing family outcome domains, rather than to propose a specific organizing framework. In the following section we use the summary to refine the outcomes and indicators proposed by participants in the OSEP-sponsored January 2003 focus groups.

**Table 3. Summary of Family Outcome Topic Areas and Emerging Themes**

Topic areas	Emerging theme
a) Services received in relation to the needs and goals of family b) Connection to natural, social, economic, and community supports c) Continuity in services (transition)	} Family Support
d) Knowledge and skill in the area of the child's development, learning, and growth e) Knowledge of early intervention system, rights, choice of services, and available supports	} Family Capacity
f) Partnerships with families g) Respect for and value of families h) Family involvement in services i) Family advocacy	} Family Involvement
j) Stress management k) Participation in everyday life activities l) Relationships among family members and child	} Family Quality of Life
m) Positive vision of the future n) Positive feelings/attitudes	} Family Hope

Because many of the topic areas identified in the nine family outcome frameworks are related to each other in numerous ways, grouping the topics by themes required making decisions about whether certain outcomes were more strongly related to one theme than another. In many cases we determined that some family outcomes and their indicators addressed more than one topic area. To clarify the decision making process, the list below describes the rationale for classifying the family outcomes and indicators from the nine family outcome frameworks into the five emerging themes and associated topic areas.

### **Family Support**

Overall, these outcomes relate to the individualized support that families receive from the early intervention system; from natural, social, and community supports beyond the early intervention system; and from ongoing services provided when transitioning from the system. *Family support* outcomes were typically stated as “services meet the needs and goals of families,” “families have access/are supported by natural, social, economic or community support,” and “families experience continuity in services.” The commonly measured construct of “family satisfaction with services” is included in this theme.

### **Family Capacity**

These outcomes describe the family’s enhanced knowledge and skill as parents, teachers, and advocates. For example, family capacity outcomes typically address parents’ knowledge of child development, learning, growth; knowledge of their child’s disability; ability to identify their child’s and family’s needs; and parents’ skill in incorporating learning activities and providing



accommodations in everyday activities. *Family capacity* outcomes also address the family's knowledge of the early intervention system, including their rights, choice of services, available supports, ability to access services, and ability to work with professionals.

These outcomes, particularly those related to the family's knowledge and understanding of child development, are strongly related to the "family involvement in services" topic area, under the *family involvement* theme. Outcomes listed under *family capacity*, however, focus more heavily on family knowledge, skill, and competence, rather than level of involvement.

### **Family Involvement**

*Family involvement* outcomes are related to the family's role as partners with the early intervention staff in delivering services and meeting the needs of their children. These outcomes cover partnerships with families; respect and value of families' role as decisions makers; family involvement in services including carrying out service options, exercising choices and rights, choosing goals and outcomes, and seeking support services.

As noted above, outcomes related to "family involvement in services" topic area are strongly related to several of the *family capacity* outcomes. The *family involvement* outcomes, however, place a heavier emphasis on families' agency and their level of proactivity in their child's services and care.

### **Family Quality of Life**

These outcomes cover the impact of early intervention services on the family's overall quality of life, including family members' stress management, their ability to participate in everyday life activities, and relationships among family members and the child.

### **Family Hope**

These outcomes cover the impact of early intervention services on the family's outlook towards the future and everyday positive feelings/attitudes.

### **Family Outcome Findings from the Interagency Outcomes Project**

The Interagency Outcomes project identified important family outcomes (as rated by a range of stakeholders), using the same three-stage process utilized for identifying child outcomes. The project's original list of family outcomes included four broad categories (*Family Competence*, *Family Knowledge*, *Community Participation*, and *Family Well-being*) containing a total of twenty items. Four of the seven *family competence* outcomes received the highest ratings of importance from stakeholders. The highest rated outcomes included *a positive relationship between the child and family*, followed by *the families' capacity to enhance their child's development*, *families' ability to demonstrate an increased capacity to plan for and meet their basic needs*, and *families' experience increased meaningful participation in decisions regarding their child's services and placements* received the next highest ratings (tied).

Following *Family Competence* outcomes, outcomes in the *Knowledge* category were the second highest rated group of items. Shown in order of highest rated importance to least, these included

*families know and exercise their rights, families possess increased understanding of how to navigate the service system, families have increased knowledge of available specialized and non-specialized community and state resources, and families possess increased knowledge of services and options. Overall, categories ranked from most important to least are: Family Competence, Family Knowledge, Community Participation, and Family Well-being.*

The report concludes by stating, “Family outcomes were rated equally high. All family outcomes were rated at 2.3 or higher on a 3.0 scale [of relative importance]. There are 11 outcomes rated at or above 2.7. Families most want to gain competence to enhance their child’s development and to acquire the knowledge needed to access services and navigate the service system. Programs also need to focus intervention in the areas needed to produce desired family outcomes as well.”

### **Suggested Revisions for the Family Outcomes and Indicators Recommended by Participants of the 2003 OSEP-sponsored Focus Group**

Based on a review of the nine family outcome frameworks, recent research activities, feedback from stakeholders including 2003 OSEP focus group participants other experts in the field, and discussions with a sample of Part C and Section 619 Coordinators, AIR suggests the following revisions to the proposed family outcomes and indicators developed in the January 2003 focus group. Citations for specific outcomes or indicators excerpted from existing family outcome frameworks are included in parentheses.

Revisions to the family outcomes and indicators were also informed by a general set of guidelines suggested by reviewers to: 1) simplify and clarify the language, 2) support their use across both Part C and Section 619 programs, 3) be measurable, and 4) build on the strengths of families. Based on comments received from state Coordinators, we also have made an effort to reduce the total number of outcomes.

It is important to note that these suggested revisions represent a first step in identifying appropriate measures for OSEP – conversations with state Part C and Section 619 Coordinators, as well as AIR’s own experience with the conceptualization and development of California’s Desired Results for Children and Families emphasize the importance of a consensus approach to determining outcomes, involving a broad base of stakeholders.

#### **Outcome 1: Families support their child’s development.**

- a. The family understands their child’s unique strengths and abilities.
- b. The family understands how their child is progressing.
- c. The family understands the intervention(s) needed to support their child.
- d. The family knows what they can do to support their child’s development, including the use of adaptations, as needed, during daily activities.
- e. The family provides varied opportunities for their child to learn, grow, and develop.

**Outcome 2: Families have positive views of their child’s developmental progress and future.**

- a. The family describes positive views of the child’s current progress.
- b. The family describes a positive future for their child.
- c. The family indicates that their child participates in the traditions of their culture.
- d. The family knows what is supposed to happen when their child leaves the program (transition).

**Outcome 3: Families are confident in their ability to carry out parenting responsibilities and skills.**

- a. Parents feel confident in their ability to access services and work with professionals. (NEILS)
- b. Families view themselves as competent in parenting their child.
- c. Families view themselves as being equal and integral members of the team (feel their beliefs and values are respected by other team members).(ECRI-MGD)
- d. Families work in partnership with service providers to meet the needs of their child.

**Outcome 4: Families make informed choices and decisions about services and support.**

- a. Families know what services are available to meet their needs.
- b. Families feel they have control in selecting services and supports that meet the needs of their child and family.

**Outcome 5: Parents are effective advocates for their child and family.**

- a. Parents advocate for services and supports for their child and family.
- b. Families are able to identify their needs and know how to access available services and supports to meet their needs.
- c. Families understand the law and their rights as they pertain to the IFSP/IEP process.

Reviewers of the list of family outcomes and indicators generated at the January 2003 focus group suggest two additional family outcome areas that OSEP may wish to consider. These include outcomes relating to the family’s *quality of life* (including such indicators as stress management, an enjoyable and loving relationship with their child, and increased participation in their family and community) and *family support* (including such indicators as family’s sense of connectedness to community and natural supports and family’s sense of the strength/adequacy of their support system to address their family’s needs). To finalize the set of family outcomes and indicators, broad involvement of stakeholders – including families and program staff – is also strongly recommended. Further discussion of considerations for the development and implementation of a system for assessing family outcomes is included later in this report.

## Family Outcome Measurement Tools

Appendix E includes a matrix of measurement tools related to family outcomes. Researchers have developed numerous data collection tools to gather information on specific constructs (e.g., parental stress level, family functioning, parent-child relationships), and there is a limited set of instruments that are inclusive of multiple family constructs. In addition, many states administer surveys to families, to assess their level of satisfaction with early intervention/early childhood special education services, as well as parents' perceptions of their child's progress. The Family Outcome Measurement Tools table includes three examples of state tools (California, Indiana, and Oregon), which were obtained from the state's web site, or directly from the Part C/Section 619 Coordinators. Given the large number of state family surveys, and the fact that the vast majority of them were not accessible to the public, the Family Outcome Measurement Tools table does not reflect an exhaustive list of all existing family-related surveys currently used by states.

In making decisions about which, if any, of the tools listed may be appropriate for national family outcomes for OSEP-funded programs, it will be helpful to revisit the lessons learned among the framers of existing systems. Much effort has been expended by these groups to solicit input from families, practitioners, and researchers. As a result, assessment tools to track family outcomes are being developed that can be directly tied to program goals and activities, are strength-based and family-friendly, minimize burden on program staff and family members, and provide valuable information for ongoing program improvement.

## Summary of Annual Performance Reports

As a condition of the Part C grant award, the lead agency in each state is required to submit an Annual Performance Report (APR) on the status of early intervention programs for infants and toddlers with disabilities and their families. This section summarizes state responses to Indicator CE.3(b) on the APR: "What percentages of children participating in the Part C program demonstrate improved and sustained functional abilities? (cognitive development; physical development, including vision and hearing; communication development; social or emotional development; and adaptive development.)"

Appendix F includes the "2003 APR Summary Table", which displays information provided to OSEP by 42 states, Guam, and Puerto Rico, as of July 2003. At the time of this review, five states had not submitted their APRs, and five other states did not specifically address Indicator CE.3(b). It is important to note that the majority of the states did not provide detailed information regarding Indicator CE.3(b). All but a handful of states (Delaware, Oregon, and Oklahoma) reported they lack procedures to collect child-level outcome data. A summary of their APR comments follows below.

Delaware conducted two child outcome studies, involving annual assessments of children using a series of standardized child assessment instruments such as the Bayley Scales of Motor Development II, Fewell Play Assessment Scale (PAS), Demographic Form, and the Home Observation for Measurement of the Environment. In addition, Delaware's Annual Family Survey documents families' perceptions of changes in their children along specific domains (e.g.

physical skills, thinking skills, social skills), as well as families' satisfaction with the progress made in each domain. Oregon has conducted a pilot test of four different curriculum-based assessment systems to track the development of children who receive early intervention/early childhood special education services. The assessments include the Arts Education Partnerships (AEPs), General Skills Assessment, Carolina Curriculum, and the HELP Curriculum. Oklahoma reported they have piloted a Child Longitudinal study using the Battelle Developmental Inventory (BDI) for a sample of children.

Most of the states responded to Indicator CE.3(b) by describing IFSP monitoring (e.g., proportion of children who have obtained IFSP outcomes), exit data (e.g., proportion of children exiting the program without the need for further referrals and service intervention), or parent reports of satisfaction with children's progress. States also described their future plans to report on the percentage of children participating in the Part C program who demonstrate improved and sustained functional abilities. Approximately 24 of the states submitting APRs responded by stating they plan to develop a child outcomes system, which may include defined outcomes, indicators, data collection procedures, and a data base to analyze information. However, little detail, if any, was provided as to how states will accomplish these tasks. It appears that many states are hoping to work with OSEP to obtain more guidance in this area.

There may be efforts occurring at the state level which have not been included in the APRs. For instance, California describes their Early Start Program Family Satisfaction survey on the APR, but do not report on their work with Desired Results for Children and Families, which is still in its development phase. A detailed review of the state APR reports can be found in Appendix F. A table is presented which summarizes the availability of child outcome data (if any), other sources of data on children's progress (e.g., IFSP reports), and future plans to collect child outcome data. The following section provides a more detailed summary of selected state efforts in the area of child outcomes, as reported in follow-up email or telephone discussions with Part C and Section 619 Coordinators during September or October 2003.

## **Feedback from Part C and Section 619 Coordinators**

In order to clarify the information provided in the APR reports and to obtain additional information regarding the status of data collection on child and family outcomes and indicators, AIR conducted interviews with a sample of Part C and Section 619 Coordinators. Specifically, Part C Coordinators were contacted in states that provided information in their most recent APR that indicated they had conducted some level of child outcome work, or had specific plans to carry out this task in the future. In addition, AIR staff consulted with Dr. Beth Rous, the director of Project SPARC<sup>9</sup>, to identify states that were conducting or planning comprehensive efforts related to child outcomes at the preschool level. For Part C and Section 619, ten states were

---

<sup>9</sup> Project SPARC is a three-year, multi-state investigation conducted by the University of Kentucky, Interdisciplinary Human Development Institute-UCE, in collaboration with the Division for Early Childhood of the Council for Exceptional Children. The purpose of the study is to develop a set of practices and/or guiding principles for Standards Based Accountability Systems at the preschool level. The primary research objective is to investigate appropriate practices for the inclusion of preschool children with and without disabilities in Standards Based Accountability Systems. Practices are being identified from current research, perceptions from the early childhood community, and current practice in states.

identified for follow-up. These states included California, Delaware, Oregon, and Oklahoma (Part C) and Louisiana, Ohio, Kentucky, Colorado, Connecticut, Pennsylvania, Delaware, and California (Section 619). It is important to note that this sample does not represent an exhaustive list of states that are conducting work related to child and/or family outcomes, but rather a preliminary exploration into state-level work in these areas.

Email messages were sent to all state contacts, followed by a telephone request for an interview to discuss state efforts related to child and/or family outcomes and obtain general feedback regarding the development of OSEP early childhood outcomes. At the time of this report, four states participated in a telephone interview, and one state provided feedback to AIR via email. A summary of these exchanges is presented below, by state. (Feedback received from state contacts after the submission of this report will be summarized and forwarded to OSEP).

## California

At the time of this report, the California Section 619 and Part C Coordinators were not available for comment (AIR will forward a summary of their feedback to OSEP once they have been interviewed). However, given AIR's six-year participation in the development of California's Desired Results for Children and Families, we can provide some background information about the system. In addition, AIR received input from Anne Kuschner, of the California Institute on Human Services at Sonoma State University, who is directing the Desired Results: Access for Children with Disabilities (DR *access*) project. The impetus for the development of the Desired Results system came from legislative pressures to show that state-funded child development programs were making a difference for children and families. Beginning in 1996, the California Department of Education brought together a diverse group of stakeholders, including researchers, practitioners, program administrators and parents with the charge of identifying a set of "desired results" for children and families – results that could be agreed upon by all stakeholders as conditions of well-being for children and families. These statements were refined over a two-year period and continue to serve as the overarching goals for the new results-based accountability system. The desired results for children are:

- Children are personally and socially competent.
- Children are effective learners.
- Children show motor and physical competence.
- Children are safe and healthy.

The desired results for families are:

- Families support their children's learning and development.
- Families achieve their goals.

Originally, the system included desired results for communities, but based on input from the field, these were dropped. Although community-level desired results may represent appropriate overarching goals, questions of who was to be held accountable for achieving them proved to be somewhat controversial. From this discussion grew the underlying notion behind the Desired Results system that persists today – that there are many contributors to the achievement of

desired results, and although all contributors play a role, programs should only be held accountable for the achievement of results that they in fact have direct responsibility for. Thus, desired results for communities are not explicitly tracked by the system.

Programs are held accountable for implementing new program quality standards, using the Desired Results Developmental Profiles (DRDPs) and Family Survey according to a specified schedule, conducting self-reviews on an annual basis and participating in state validation reviews every four years (both self-reviews and validation reviews include a requirement to use and report findings from the Harms et.al. environment rating scales). The criterion for success with regard to children's achievement of desired results is that programs are expected to show that individual children are making progress (using successive individual assessments as the point of reference) and that program staff are using the DRDP data to plan appropriate learning activities for individual children and groups of children. The DRDPs are structured observation tools that are to be based on naturalistic observation of children during typical everyday activities. Program staff are asked to select a method for documenting their observations (e.g., anecdotal records, portfolios of child work, photographs, etc.) and to assess children's developmental levels based on this documentation of their observations. The DRDP is designed to be used for children who participate in programs for 10 or more hours per week, and who are known to the assessors for at least 30 days prior to the first assessment. The CDE has been phasing in implementation of the Desired Results system over a four-year period, during which time program staff attend regional trainings and receive ongoing technical assistance.

From the outset, two divisions of the California Department of Education, the Child Development Division (CDE/CDD) and the Special Education Division (CDE/SED), have collaborated to employ a universal design whereby the desired results, indicators, and measures are identical for *all* children. Under the CDE/SED, DR *access* project staff have worked closely with CDE/CDD and its contractors to ensure that the assessment tool, the Desired Results Developmental Profile, is as inclusive and appropriate as possible for assessing the progress of children from birth to five with disabilities. DR *access* project staff have also developed a system of adaptations and guidelines for the DRDP that will allow practitioners to assess children with disabilities in an appropriate manner within the structure of desired results. The DR *access* project staff continue to work with CDE/CDD to refine and field test the instrument, which is undergoing a major revision. This revision is being conducted to identify and describe discrete levels of development for each indicator and theme, so that assessors can more easily select the level that most appropriately describes the child's current level of skills and behaviors, based on naturalistic observations during typical everyday activities. The new versions will depict a continuum of developmental levels, based on the latest child development research, for all major domains of development spanning from birth through 12 years of age.

The CDE/CDD is developing a revised Family Survey to be administered once per year that asks for parent feedback about the information and services they have received to help them support their children's development and achieve their family's goals; their child's progress; their sense of the program's "family-friendliness"; and their satisfaction with a wide array of program activities and characteristics. The revised Family Survey is being field-tested during the 2003-2004 school year. DR *access* staff have conducted a series of focus groups with parents and practitioners to gather input regarding the measurement of family outcomes for families of

children with disabilities, and will be pilot-testing two versions of a Family Survey in early 2004. DR *access* staff have been collaborating with Dr. Gloria Harbin to explore the use and/or adaptation of the “Family Benefits Inventory” for California families served through CDE/SED.

The revised DRDP is described as a “curriculum embedded assessment”, in that it is aligned with developmentally appropriate practice and will have direct links to: 1) California’s Prekindergarten Learning and Development Guidelines that were published in 2000 and prekindergarten curriculum that is currently under development by the California Institute on Human Services at Sonoma State University; 2) infant and toddler learning and development guidelines and curriculum which are currently under development by WestEd; and 3) school-age care guidelines and curriculum, which are currently also under development at Cal Poly Pomona.

Plans for implementation of the DR *access* system are not yet final – it is anticipated that the CDE/SED will begin to use the new system over the next several years, when the revised DRDP is implemented statewide. This means that children (three and four year-olds) served under Part B of IDEA will participate in the DRDP process. For infants, it will be voluntary, as it is not a requirement under Part C that infants and toddlers participate in statewide assessment initiatives.

Lessons learned in California from the development process of the Desired Results system include a strong emphasis on the involvement of stakeholders at all levels from the beginning; opportunities for interim feedback and comments from the field at-large at regular intervals; allowance for time to thoroughly develop, pilot test, revise, and field test the instruments; the need for rigorous training and technical assistance opportunities prior and during implementation; and involvement of age-level and measurement experts in instrument development.

In communications from Anne Kushner of the DR *access* project, she cited some of the key challenges facing OSEP, including policy, legal interpretation, system change issues, resources, time, money, articulation across the systems (special education, early care and education), and responding to some of the lessons learned from California. Measurement issues, selecting appropriate standards, defining “proficiency”, and determining where the level of accountability will reside have been key to the California process. She suggested that OSEP “consider a five-year plan” as the “development of these systems has enormous consequences [for] and impacts on programs,” and it should be acknowledged that “you are introducing system change.” Anne emphasized that a “clear understanding of the rationale, importance, relevance and ‘fit’ with what is already in place” (such as Head Start, Healthy Start, existing state systems, etc) will be critical. For a national system, she encouraged OSEP to involve state- and program-level personnel in the development process and to identify other stakeholders that this effort will affect. Recognizing stakeholders’ varying needs for support and information through various stages of system development will also be essential. Anne also recommended advocacy at the congressional level to strengthen the message of “outcomes” for Part B and Part C within an appropriate context. She emphasized that the message needs to be clear about how kids will be involved, and how the system will support progress in the regular curriculum and achievement of readiness skills. Finally, she encouraged OSEP to embed the outcome assessment in a system that includes standards and links to curriculum decisions “so that it becomes a tool to support program quality as well as growth and development for children.”



## Connecticut

In 1999, Connecticut published the *Connecticut Framework: Preschool Curricular Goals and Benchmarks*, a document which outlines the skills and abilities that children should be demonstrating upon kindergarten entry. A draft of the *Framework* document was piloted over a year-long period by the early childhood field. Feedback received from the pilot led to revisions, modifications and the finalization of the document by the State Department of Education. A broad-based group of stakeholders, and a small working group, developed the *Preschool Assessment Framework*, based on the *Preschool Curricular Goals and Benchmarks*, which is designed to monitor child progress and identify child outcomes. The *Preschool Assessment Framework* includes developmental markers for children ages 2.5 to 5.5 years, while acknowledging variations in development. The *Assessment Framework* is currently in draft form and will be piloted for one year in various programs throughout the state. Training will take place throughout 2003 and 2004. The *Curricular Goals and Benchmarks* and the *Assessment Framework* are intended for use by all preschool programs, including those serving children with disabilities.

The Connecticut Section 619 Coordinator (Maria Synodi) was involved in the Department of Education's early and on-going conceptualization and eventual publication of the *Preschool Curricular Goals and Benchmarks*. Early in the process, the State discussed and decided to create one system for all children, including those with disabilities. The primary goal of the Connecticut effort was to ensure that all preschool programs were "on the same page, reaching for the same high expectations and success of all young children." The *Curricular Goals and Benchmarks* and the *Assessment Framework* are intended for use in all types of preschool programs across the state including Head Start, the State's Preschool Initiative: School Readiness, state-funded child care and other public and private programs delivering programs to children ages 3 and 4. According to the Coordinator, the primary users of the *Framework* include special education preschool staff, particularly as many early childhood special education services are offered through school-based preschool programs.

The Section 619 Coordinator suggested that OSEP carefully review how the new early childhood outcomes will ensure that measures and data will not be used as "high-stakes" assessments. Statewide collection and reporting of child outcome data can easily be used to make high-stake decisions regarding children's educational plans and futures and may inappropriately affect schools, parents and communities. Exactly how OSEP will ensure that the new outcomes system does not lead to the use of data for high-stakes decisions should be extensively explored, both within OSEP and with state officials. Other questions which OSEP should address include:

- What outcomes are we trying to measure? General outcomes that apply to all preschool programs, or outcomes specifically tied to programs or services under the IDEA serving children with disabilities?
- How can OSEP's system be aligned with existing state systems for all children?

The Section 619 Coordinator also provided recommendations for revising the family outcomes proposed by the January 2003 OSEP focus group participants. From a Section 619 perspective, the current family outcomes seem heavily focused on families' experiences in the Part C system.

Specifically, the outcomes: “*The family understands developmental milestones*” and “*The family knows how to incorporate instructional strategies into daily activities*” are more appropriate for families in Part C, where there is a stronger emphasis, on a daily basis, on issues such as family capacity and family learning opportunities. In Part C, many of the support services occur in the home, whereas in the Section 619 system, the primary focus shifts to supporting children’s later school success and educational outcomes, supporting children’s independence, and increasing parent involvement in school. The definition of family involvement varies across the two systems.

Another concern in regard to the family outcomes proposed by participants in the January 2003 OSEP focus groups is related to satisfaction measures, particularly those that are too general (e.g., “are you satisfied with services, yes or no?”). The Section 619 Coordinator felt it was critical to tie satisfaction measures to specific measures. For instance, Connecticut administers a rolling survey of families when they transition out of the Section 619 system. The survey contains five to six questions, with only one item focusing on general satisfaction. The remaining items probe the idea of “did things happen that were supposed to happen for your child.” The more concrete nature of this survey provides Connecticut with a clear picture of whether the system is succeeding in delivering the appropriate services to children within prescribed requirements. Connecticut also includes family outcomes that relate to parents’ knowledge of their rights, service options, avenues for their participation in their children’s education, and transition planning. The Section 619 Coordinator stressed that family outcomes that focus on “understanding developmental milestones” and “embedding learning opportunities” are appropriate in general, but that OSEP should consider the variations in the Part C and Section 619 systems when developing outcomes and indicators. Specifically, does OSEP want to develop umbrella outcomes for both Part C and Section 619, separate outcome systems for each system, or a combination of sorts?

The Section 619 Coordinator suggested that OSEP collapse some of the child outcome areas proposed by the January 2003 focus group participants and identify two to four general outcomes with three to five indicators each. (The same process should be applied to the proposed family outcomes). Keeping the OSEP outcomes as simple as possible will both reduce burden on the part of states as well as help to align OSEP outcomes with state-developed outcomes. In addition, the current list of child outcome areas appears to orientate more strongly to preschool-age children, rather than children birth to three years. It is also important to maintain a focus on social-emotional issues, as well as literacy, which has gained more recent national attention. Finally, the notion of adaptive and physical/movement outcomes for preschool age children is a difficult one. According to the Connecticut Section 619 Coordinator, adaptive and physical/movement issues seem to apply more directly to children birth to three years. Moreover, if a preschooler has an issue related to the adaptive and/or the physical/movement domain, they most likely will have the same issue at age five, in which case, determining an outcome/indicator(s) in this area is difficult for various reasons. Subsequently, OSEP should carefully consider how they address outcomes and indicators in these domains, specifically as they appropriately relate to the Section 619 program.

Connecticut is using a global indicator of placement in regular kindergarten for children transitioning from the Section 619 program: “Children will enter kindergarten at age 5 prepared

for success”. Connecticut views this as a useful measure of the percentage of children who have attained the basic skills and abilities to proceed along with their typically developing peers in the general education curriculum. This outcome is also tied to the state’s outcome for all 3 and 4-year-old children. OSEP may want to consider more global or “umbrella” outcomes such as these that focus on all children, as they proceed in the development of early childhood outcomes.

Finally, the Section 619 Coordinator suggested that the OSEP outcomes apply across states, build on (and not duplicate) existing systems (i.e., incorporate existing expectations that states have for preschool children in general), and avoid placing too heavy a burden on the establishment and collection of data systems to measure the success of individual children and creating an aura of “high stakes testing”.

## Colorado

The Colorado Section 619 Coordinator (Nan Vendegna) described efforts in Colorado related to child and/or family outcome data. Two major efforts are currently underway—*Building Blocks*, which are guidelines for early childhood that bridge the state’s K-12 content standards and a new system of preschool outcomes and indicators being developed by the Colorado Department of Education (CDE) in collaboration with the University of Colorado, Denver. Thus far, *Building Blocks* documents have been completed for literacy and math, and are in development for science, social and emotional skills, and the arts. While the *Building Blocks* documents provide a direct map with the K-12 content standards, the Coordinator stressed that they are guidelines, not standards, in that they are more descriptive than measurable. There are three main purposes: 1) connecting early childhood education to the K-12 content standards, 2) providing a resource that describes and advocates for appropriate teaching strategies in early childhood settings, and 3) offering a tool to support awareness and understanding of early childhood foundational skills for parents and teachers in a variety of early childhood settings. The *Building Blocks* provide specific examples of the types of experiences and interactions preschoolers need to develop the foundation for attaining the K-12 standards and describe how they might look in the home and a variety of early childhood settings.

In addition, the system of preschool outcomes and indicators under development is well underway. Rubrics will be sent to a national panel for validity review by January 2004. The State expects to finalize everything by March or April of next year, with the exception of testing for inter-rater reliability (which will most likely occur next fall). The system is intended to measure progress and has been piloted in two school districts to date. While it concentrates on child outcomes, the system also includes a community and family component. Teachers will conduct data collection for the child outcome rubrics through observations three times per year. There are accommodations for children with disabilities for each item. In addition, the system has been developed to respond to the diversity of the state’s populations and preschool program types. Reporting will be possible at a variety of levels including by classroom and program, as well as longitudinally. Since Colorado is a local control state, programs are not required to participate. However, given the current policy climate that emphasizes the importance of demonstrating program efficacy, the state’s preschool programs appear eager to participate.

Finally, the State is compiling a formal crosswalk of the outcomes and indicators and the *Building Blocks*, Work Sampling, Creative Curriculum, High/Scope key experiences, the Head Start Performance Standards, and the Denver School District Content Standards (this district has their own set of standards). With the exception of mapping to the latter, the crosswalk is complete.

The Coordinator provided comments regarding who should be involved in the development of OSEP outcomes. If OSEP develops outcomes, they will be useful to states that lack adequate resources to develop their own system. However, OSEP-developed outcomes would need to align with existing state systems. She is encouraged by the fact that OSEP is seeking state input as this increases the likelihood that the new system will be aligned with and will build on what states are already doing rather than “reinventing the wheel.”

In regard to challenges OSEP may face, the Coordinator commented that any system measuring outcomes runs the risk of being misused. For instance, in Colorado, they have heard of some programs attempting to redesign the *Building Blocks* guidelines into a checklist assessment, even though this was never the original intent. The OSEP system will have to be designed with precautions so that it does not involve inappropriate testing of children, but rather helps the early childhood community learn how to support children’s development.

In addition, she offered several “lessons learned” from their experience. First, she feels that Colorado made a strategic error in not engaging school administrators sufficiently in their development process. While the early childhood community is well aware of the *Building Blocks*, school principals lack awareness that there is anything comparable to K-12 content standards for preschool programs. Second, the professional development necessary to implement the *Building Blocks* was greatly underestimated. The CDE provides extensive training on how to interpret the document, but there has been a lack of training on how to implement content/teaching strategies at the classroom level. Finally, a success of their development process has been that multiple stakeholders have been involved. They have a “state systems team” composed of state-level representatives from the departments of Education, Human Services, Public Health, Child Care, Prevention, Resource and Referral, as well as Head Start, Part C, and Educare, a non-profit initiative, organized by Colorado business, philanthropic, political, community, and religious leaders to improve the early learning experiences of Colorado’s youngest children. All decisions of the team have been made collaboratively and interagency buy-in has been critical. The Colorado Section 619 Coordinator also suggests that OSEP gather input from states currently working on these issues, and solicit regular feedback throughout the development process.

## **Delaware**

AIR staff conducted a joint interview with the Part C Coordinator (Rosanne Griff-Cabelli) and the Section 619 Coordinator (Martha Toomey) in Delaware. Delaware has developed child outcome standards, and conducted several studies of child outcomes for children participating in Delaware’s early intervention program.

The *Delaware Early Learning Foundations for School Success* represents the culmination of almost two years of work by many individuals representing the interests of young children. The *Early Learning Foundations* document provides a tool to enhance the quality of early education services for preschool age populations. The *Foundations* document is intended to be used as an instructional or curriculum guide for planning. The items listed in each developmental area are meant as focus points for guiding instructional planning and not intended as specific child skill expectations. The Delaware Department of Education is planning to translate the document into Spanish and develop an accompanying activities manual that can be used to further support and promote children's development. In addition a committee has recently been convened by the Department to develop standards for infants and toddlers.

Delaware has conducted several longitudinal studies related to child outcomes for children receiving early intervention services. Initiated in 1997, the *Delaware Early Childhood Longitudinal Study* was designed to follow a group of children as they entered kindergarten in the fall of 1997 through their third grade year, coinciding with their participation in the 3<sup>rd</sup> grade Delaware State Testing Program. One of the primary research questions examined how children with disabilities or living in poverty who received early intervention programming compared to children in similar situations who did not receive early intervention services. The outcome variables included annual year-end grades, annual grade promotion/retention, formal behavioral reports, referrals to and enrollment in special education services, referrals to and enrollment in other school services, and the third grade Delaware State Testing Program results in reading and math. A report with the results was published in April of 2002 and is available on the Delaware Department of Education website.

In addition, Delaware conducted the Head Start/Early Childhood Assistance Program (ECAP) Outcome Study, which included data collection on child development skills and family goals participating in Head Start and ECAP programs in the 2001-2002 program year. Programs were asked to measure developmental changes in children in areas such as cognitive, language, physical, and social-emotional development. The following assessment tools were used: Class Progress Chart, Creative Curriculum Child Development and Learning Checklist, Creative Curriculum Developmental Continuum for Ages 3 – 5, Telamon Outcomes Assessment Database – Early Childhood, and the Work Sampling for Head Start Developmental Checklist for Four Year Olds. In order to track family and community outcomes, programs were asked to report the number of goals families had identified on their Family Partnership Agreements in areas such as improved parenting skills, literacy, well-being and self-concept, and other related constructs. A report summarizing the findings of the study is available on the Delaware Department of Education website. A Child Outcome Study has also been conducted for children birth to three, involving the assessment of children's cognitive, motor, and play skills.

In regard to the family outcomes and indicators proposed by the participants of the January 2003 OSEP-sponsored focus groups, both the Part C and Section 619 Coordinator agreed they were appropriate. They recommended that additional outcomes be considered which focus on how programs are supporting families' expectations that their child is participating in inclusive settings. The challenges of tracking family outcomes was noted. In Delaware, all families participating in special education preschool programs complete a survey, with most items focusing on family satisfaction. Focus groups are also held every other year. The Part C program

administers surveys to a sample of families that include more of the constructs included in the family outcomes and indicators proposed by the January 2003 focus groups (e.g., recently the Part C survey included items related to families' perceptions of quality of life for themselves and their children) and convenes focus groups with families every other year.

The Coordinators emphasized the importance of connecting services received with outcomes. Families receive different sets of services and through varying agencies, which will ultimately impact both family and child outcomes. In addition, factors such as poverty and other community variables should be considered, as they influence outcomes. The Coordinators also noted that while it is critical to examine contextual factors in relation to outcomes, it is relatively easy to overwhelm a data collection system with too many variables. Yet, the disadvantage of a more simple model is that it becomes less useful at the local level.

## **Kentucky**

The Section 619 Coordinator (Barbara Singleton) for the Kentucky Department of Education, provided information regarding Kentucky's efforts in the area of early childhood outcome data. In 2001, Kentucky began the process of developing learning standards for children birth to five years of age. Training on the use of the standards was first offered in June 2003. The Kentucky Early Childhood Standards (KYECS) will become available on the Kentucky Department of Education website in January 2004.

According to the Section 619 Coordinator, the KYECS closely align with the developmental domains and content areas of the core areas for outcomes and indicators proposed by the participants of the January 2003 OSEP-sponsored focus group. The Kentucky standards include the following areas for children birth to three years: creative expression; cognitive; language; social-emotional; and gross and fine motor. The standards for three- and four-year old children are: arts and humanities; language arts (early literacy); mathematics; physical education; health education; science; and social studies. The use of the KYECS is voluntary, but encouraged in all types of early childhood programs throughout the state. The KYECS is not designed to yield particular child outcome data, but rather as an observation tool for staff to assess and plan for continued progress of individual children in each domain area. The KYECS will not be used to aggregate child level data.

Kentucky is participating in a seventeen state foundation-funded initiative<sup>10</sup> to identify child success in reading by the end of grade three. Kentucky has identified the following draft family and child outcomes for all children, not just those with special needs:

---

<sup>10</sup> The School Readiness Indicators Initiative works with 17 states to develop a comprehensive set of school readiness indicators to inform public policy for young children and their families. The School Readiness Indicators Initiative has three goals: 1) to create sets of indicators in states to describe school readiness 2) to use the indicators to influence state policy on children's issues and 3) to communicate data meaningfully across the state and around the country. This initiative is sponsored by the David and Lucile Packard Foundation, the Ewing Marion Kauffman Foundation and the Ford Foundation.

**Children possess the foundation to succeed in school**

- Infants are born healthy
- Children have healthy growth and development
- Children have access to early care and education programs
- Children have access to high quality early care and education programs
- Children at-risk receive appropriate services

**Schools ensure children's continuous progress**

- Educators are qualified and competent
- Children make continuous progress
- Children perform at high levels

**Families and communities support life long learning**

- Children live in economically secure families
- Families have the skills and education to earn a living wage

The Kentucky Section 619 Coordinator commented on potential issues and challenges that may emerge in the development of OSEP early childhood outcomes. First, there is the issue of who will participate in the development of outcomes. If states identify outcomes, they will align with other state education goals. However, if OSEP determines outcomes, it promotes consistency of data collection across the nation. The Section 619 Coordinator felt either there should be consensus on the outcomes for children and families, or each state should identify their own outcomes. The different educational goals of each state may make reaching consensus about common outcomes challenging. Second, there are financial implications for both states and OSEP that should be considered when planning for the systematic collection of data. A third consideration is the timeframe for the effort. The 619 Coordinator suggested that OSEP might consider tapping a few states to work together to reach consensus about outcomes and a process for system development within those states. Another suggestion is for OSEP to collect data for a limited number of child and family outcomes prior to initiating a full-scale system that uses all the outcomes.

**Oregon**

The Director of Early Childhood Programs (Diana Allen) and the Section 619 Coordinator (Nancy Johnson-Dorn) described efforts in the state of Oregon related to child and family outcomes. Oregon has completed a first draft of *Early Childhood Content Foundations*, designed for all children, including those with disabilities. The *Content Foundations* were created to align with the state's K-12 content standards and the Head Start Outcomes Framework, in an effort to create one set of related guidelines for Oregon's education system. The State is working with the University of Oregon to develop the *Content Foundations*, including one researcher who assisted

Illinois in developing their early childhood standards. Oregon is also planning to develop an assessment instrument that will be aligned with the *Content Foundations*.

Recently, Oregon conducted a two-year pilot test of four curriculum-based assessment instruments to gather data for children with disabilities (the Assessment, Evaluation, and Programming System; the Generic Skills Assessment; Carolina Curriculum; and HELP curriculum) to track the development and progress of children who receive early intervention and early childhood special education services.

The Director of Early Childhood Programs and the Section 619 Coordinator emphasized the challenge of aligning OSEP outcomes with state-developed outcome frameworks. For instance, through the assessment instrument pilot study, the State found that many children with disabilities who were served through Head Start were assessed twice, using separate instruments. The goal of the State's recent work has focused on helping programs use the same or related set of standards and assessment instruments.

The Director and Coordinator also commented on the family outcomes recommended by the participants of the January 2003 OSEP-sponsored focus group. The State administers a family survey every two years to a sample of families, with the assistance of the University of Oregon. In general, the Oregon Family survey is comprehensive of the proposed family outcomes and indicators. The Director and Coordinator discussed some of the difficulties of measuring family constructs, particularly items such as "*families exercise options within a framework of evidence based practice*" (e.g., who determines this? How can the State confirm parent reports?). They emphasized the importance of determining measurable family outcomes and indicators. Finally, the Director and the Coordinator also raised the issue of funding to support child and family data collection and accountability, balanced against funding to deliver direct services to children.

## Key Considerations in Developing the Early Childhood Outcomes System

In developing an Early Childhood Outcomes system, OSEP should consider a range of issues that are described below and which have been identified through a review of the literature, existing outcome systems, and discussions with key stakeholders in the field. The following section identifies general issues to be considered, followed by considerations which relate specifically to child outcomes and family outcomes.

### General Considerations

- 1) **Ongoing involvement of a broad group of stakeholders.** The ultimate success of OSEP's early childhood outcomes system will depend upon the buy-in and participation of federal, state, and local Part C and Section 619 program administrators, service providers, and families. To this end, input received by AIR overwhelmingly emphasizes the importance of involving stakeholders in discussions about the new system from the outset, both to improve prospects for successful implementation and to ensure that the final framework and its components are of clear benefit to and feasible for participants at all levels. Stakeholders



include representatives of early childhood general and special education state and national systems where children with disabilities and their families may receive services, local program administrators, service providers, and family members. In addition, the outcomes system development process will benefit from the input of content (i.e., literacy, math, language/communication, physical/movement, and adaptive), age-level (i.e., infant, toddler, and prekindergarten), and measurement/validation experts. Finally, OSEP should continue to involve those individuals from key states and systems (e.g., Head Start) who have already been grappling with issues of early childhood outcomes measurement as it relates to program accountability. Lessons learned from these individuals will continue to be invaluable and will help to avoid “reinventing the wheel.” Many of the issues and concerns that states have had to address in developing statewide systems will have applicability to the national system.

- 2) **Purpose, goals, and accountability.** The purpose of the system will be to collect child and family outcome data nationally to enhance program quality and accountability. However, it should be clearly stated that the system is *not* intended to be a “high-stakes” assessment of individuals. The system’s implementation will be undermined if its purpose is not clearly understood by those programs required to collect data. Similarly, in developing the new outcomes system, OSEP may want to consider a guiding principle of California’s Desired Results for Children and Families system—namely, that no one agency or program should be held accountable for children and families meeting all desired outcomes, but rather that a whole range of programs, agencies, and support services work as contributors toward the achievement of these outcomes, conditioned by the larger environment within which children and families live. It is recommended that the intent of the system be to support ongoing program quality improvement. The three overarching goals of the system should therefore be to: 1) improve instructional quality by assisting with educational planning, 2) identify areas for program improvement, and 3) guide targeted training and technical assistance that strengthens program effectiveness. In addition, safeguards should be put into place to ensure that measures are not used for individual diagnosis or placement of children. Aggregated information that supplements local data collection efforts should be reported back to programs about groups of children, not individuals.
- 3) **Determining quality of instruments and measures.** The technical quality of assessment instruments should be evaluated in terms of their demonstrated evidence of validity and reliability; that is, measures should be shown to consistently assess all identified constructs as intended. For example, questions to address include:
  - Are the right constructs being measured?
  - Does the instrument capture the appropriate aspects of what is measured?
  - Are measures consistent?

In addition to these criteria, it is important that instruments have been shown to be valid and reliable under field conditions similar to those in which they will be used (Love, 2001). For instance, in the case of the new outcomes system, child assessments must be technically adequate for young children with disabilities. Moreover, all measures selected must also be thoroughly tested and sensitive to cultural, linguistic, and socioeconomic differences. In

cases where no such measures exist, OSEP should include content, age-level, and measurement experts to develop and test them.

- 4) **Selectivity in determining outcomes and indicators.** There are many outcomes and significantly more indicators that are relevant to Part C and Section 619 programs than can be included in a national early childhood outcomes system. Decisions will need to be made as to which outcomes and indicators are the most desirable to include in the measurement system. Effort should be spent on developing and measuring a limited set of outcomes and indicators rather than a “laundry list” of items. However, it will be important to convey to program staff that the new system will supplement, but not replace existing local assessment systems that are more comprehensive and designed to align with curriculum and meet local needs. The system should include a feedback loop by which outcomes and indicators can be adjusted or changed over time to continue to accurately capture the impact of the Part C and Section 619 programs. In addition, considering the average time that children and families participate in early intervention and preschool services, outcomes should be dynamic and lifespan-oriented, not time-limited, pertaining only to the short-term results of early intervention/preschool programs. A reviewer suggests that indicators directly relevant for early intervention and preschool “could be subsumed under more general outcomes and measures could be developed to assess progress on indicators and movement toward or partial attainment of general outcomes” (cf. McConnell, 2001). Finally, the content and wording of outcomes and indicators should be carefully reviewed to ensure cultural competence and sensitivity to diverse populations.
- 5) **Consistent terms and definitions.** An outcomes system that will be used across varying Part C and Section 619 programs in multiple states will benefit from the inclusion of explicit definitions of the terminology used. The model should include a glossary for terms such as “domain,” “outcome,” “indicator,” and “measure.” A review of national and state program and child outcome standard systems indicates that these terms are understood and used very differently. Systems, such as Desired Results for Children and Families in California, have already attached a particular meaning to these words that may be different from how they are used in other programs or how they will be used in the new outcomes system. To help ensure the appropriate implementation of a new outcomes system, clarity and consistency of terms is critical.
- 6) **Data collection.** The outcomes system should be designed to maximize the feasibility, ease, and efficiency of data collection and to minimize burden on program staff. The impact of data collection on families should also be considered. Discussions regarding which constructs should be measured should also take into account the burdens of time, cost, and training. Some compromises will be required about which constructs to include in efforts to reduce these burdens and to ensure that the collection of data is feasible and realistic. In addition, since the system is intended to monitor the progress of children served, the data collection schedule should accommodate the “floating nature” of enrollment in early childhood programs. That is, attention should be paid to the enrollment date of each child, so that reporting of the program’s impact on the progress of children does not include assessment results for children who have not been in a program for a sufficient period of time, nor for their families.

A reviewer cautioned, “Do not underestimate the tremendous infrastructure challenges inherent in this effort. From the resources that will be necessary just to manage the data to the tremendous amount of training that will be necessary to ensure that programs collect reliable data, the challenges to this effort will be tremendous. Allow time and resources to address these infrastructure issues so that the system will provide useful and accurate information upon which to make decisions.” (Scott-Little, C., email communication to AIR, 2003)

- 7) **Coordination across states and multiple service delivery programs.** Given that individual children routinely participate in a variety of programs and receive an array of services, OSEP should address whether the system will evaluate the educational and therapeutic services provided by the lead agency—a program—or the outcomes of a comprehensive, interagency, coordinated system designed to meet the diverse needs of the child and family. Moreover, it will be necessary to consider how the outcomes system will be coordinated across multiple early childhood programs (e.g., Head Start, Early Head Start, Even Start) and bridged with the K-12 system. It will also be important to determine how the national system will be aligned with systems at the state level, which may differ in purpose and design. Questions to address include:
- Should there be a common core of measures collected across all states, programs, and service agencies?
  - If so, what will constitute this common core and in which areas will states and programs have flexibility (e.g., an array of measures to choose from)?
  - Should states be required to develop their own measures for assessment of child outcomes? If so, how can collaboration across states be facilitated?
  - What steps will be taken to ensure that the new outcomes system does not impede local curriculum and assessment systems currently in place that are tailored to their community’s unique needs?

If states develop their own measures, it will be important to address challenges related to comparability, so that the data yielded by the system inform OSEP about the progress children are making in programs across the nation. In the absence of a common framework of measures, it may be difficult to draw valid and reliable conclusions in this regard. The system must also address coordination of federal and state reporting requirements. For instance, Head Start is implementing a national reporting system that will impact many of the same providers who serve children participating in early intervention and preschool programs.

- 8) **Data analysis and usage.** The OSEP early childhood outcomes system must clearly delineate how data will be analyzed and used. Although there are benefits to be gained by simply developing consensus around what program outcomes are to be achieved and in what way those might be indicated, the ultimate goal of the outcomes model is to have data to support theories about program impact. How the child and family outcome data will be analyzed and used are key considerations. The organizational level at which the data will be aggregated and analyzed must be determined (e.g., the child, classroom, program, state and/or national level). The policymakers at each level responsible for the outcomes system should explicitly state that data will not be used to make “high stakes” decisions for

individual children and specify safeguards to ensure this. Policymakers will need to determine in what ways the outcome system will facilitate program planning and what additional data may be needed to aid in analysis and interpretation. For example, data analysis should be able to account for contextual differences, such as the variability in program settings, models, professional standards and levels of service, as well as the varying characteristics of populations served. Transparency around the purpose of the outcome system and how the data will be used will serve to facilitate participation in the system and lessen potential concerns among stakeholders. For example, if OSEP wishes to link outcome data to continuous improvement and monitoring efforts, the system will need to accommodate meaningful aggregation of outcomes across children and families (in a service context that values/promotes individualization of family/child outcomes). Finally, consideration must be given to technological concerns related to data management and analysis capabilities at the program, community, and state levels.

- 9) **Training and technical assistance.** Delivery of carefully planned training and technical assistance will be essential both to implement the system and to support program quality improvement. In the implementation phase, training and technical assistance will be necessary to ensure the collection of valid and reliable data. In the process of selecting and/or developing instruments to be administered through the outcomes system, it will be critical to determine the educational background and the level of training needed to administer assessments. Training and technical assistance are also essential to ensuring that all local programs receive the same information and that all children are assessed using standardized methods. In addition, consideration should be given to who will provide local leadership for training on the new outcomes system. OSEP may want to consider adopting a training-of-trainers strategy—as is being used by the Head Start National Reporting System—to prepare local staff in the assessment and reporting procedures of the new system (Hill, 2003). Careful attention should also be paid to how outcome data will be used to inform and design training and technical assistance that supports desired outcomes and improves program effectiveness.

## Considerations Related to Child Outcomes

- 1) **Selection and development of measures and assessment methods for children with disabilities.** All outcome measures must be inclusive of children with disabilities or adapted as such. It is critical, moreover, that consideration be given to ensuring that measures are appropriate given the range, type, and severity of disabilities. In reviewing existing measures for possible use in the new system, it should be kept in mind that screening instruments are generally not appropriate for assessing the impact of early childhood programs on child development (USDHHS, 2002). Consideration should also be given to the method of assessment; for instance, should measures used be observation-based/naturalistic, curriculum-embedded, a standardized “on-demand” set of tests, or a mix? In order to avoid well-established problems in the use of norm-referenced tests with special populations, it is recommended that approaches “make use of everyday experiences that more adequately enable children to show what they know, what they can do, and what they are experiencing,” rather than adopting “highly specialized procedures administered in formalized environments in a constrained manner” (Meisels and Atkins-Burnett, 2000). In addition, California and other states have suggested that it is most appropriate that individualized child progress is the

standard against which each child should be measured (i.e., a criterion for success in California's Desired Results system is that for any particular indicator, an individual child shows growth in comparison to his or her prior assessment).

Similarly, careful consideration must be given to the ages for which child measures were developed. It must be kept in mind that infants, toddlers, and preschoolers "have short attention spans and go through periods of variable, rapid development" (NASP, 2002). Consequently formal, standardized assessments are generally not recommended and should be used only with caution since they may yield inaccurate results. The measures included in assessments and the administration procedures should be matched with and responsive to the ages and developmental characteristics of young children.

- 2) **Assessment of the adaptive domain.** The adaptive domain encompasses developmental characteristics related to children's participation and full inclusion in everyday activities, settings, and routines in the home and community. While the subdomains measured by available measurement tools that assess the adaptive domain vary by instrument, the work of recent experts suggests that the following subdomains should be included: practical, personal care, community self-sufficiency, conceptual, and social (Horn and Childre, 2004 in press). Considerations related to assessment of adaptive behavior are similar to those outlined above in relation to assessment of young children and those with disabilities. Since adaptive behavior constitutes the skills necessary to meet the demands of routine functioning, it cannot be perceived on the basis of a single performance or interaction; rather, it is best observed over time in natural settings by an assessor who knows the child well (Horn and Childre, 2004 in press). Finally, it is important that "the child's age, interest, motor or sensory disabilities, and the home and community environments [are] considered in the assessment process and in the interpretation and use of results" (Horn and Childre, 2004 in press).
- 3) **Whole child approach.** It is important to recognize that there may be overlap in the themes addressed within the six child developmental domains that have been preliminarily identified by the OSEP-sponsored Early Childhood Outcomes and Indicators focus group. The overlap of aspects of the adaptive domain with other developmental domains is particularly apparent; for instance, "peer cooperation and interaction, a component of the personal/social responsibility domain [of the adaptive domain], is clearly an important skill area in the social development domain. An implication of this overlap is not to remove it from consideration in adaptive behavior assessment but rather to highlight the importance of conducting comprehensive assessments that do not artificially splinter skills into measurable units" (Horn and Childre, 2004 in press). Therefore, the assessments adopted by OSEP should incorporate a whole child approach.
- 4) **Family-centered child assessment.** Children must be viewed and supported as individuals and as members of families, cultures, and communities (NAEYC and NAECS/SDE, draft 2003). Accordingly, assessments of young children must take into account the considerable influences of the family system and home environment on their development (NASP, 2002). As part of assessment procedures, it is therefore essential to elicit input from families since they are able to "provide information that cannot be collected easily through direct observation or testing" (NASP, 2002).

## Considerations Related to Family Outcomes

- 1) **Building from family strengths.** Part C and Section 619 programs are designed to help families meet the needs of their children (birth to five years) with disabilities. The selected family outcomes and indicators should build from the existing skills and abilities that families already possess. For instance, care should be taken to present the outcomes and indicators as positive statements to which families can react whenever possible, rather than negative items which place families within a deficit model. The outcomes system should not present Part C and Section 619 programs as an effort to compensate for a perceived lack of parenting skills, but rather as an effort to build on families' strengths.
- 2) **Intrusiveness of measures.** Similarly, the data collection tools used to measure family outcomes should be developed with sensitivity to the family unit in mind. The issue of family privacy is an important element to be considered when developing surveys or interview protocols. The relationship between the questions being asked and the outcome being assessed should be evident to the family member involved in the evaluation. The phrasing and terminology of the questions should not intimidate or challenge parents in their role as caregivers. Family outcome tools should demonstrate respect for diverse family configurations and recognize parents as their children's first and most important teachers, and thus, as key contributors to children's achievement of desired results.
- 3) **Relevance to programs and to families.** Family outcomes should be developed within the context of the purpose and scope of the Part C and Section 619 programs and designed with the interests of families in mind. Family outcomes will be most useful if they are directly tied to the stated goals of the programs and relevant to the needs of families. The central goal of enhancing the capacity of families to meet the special needs of their children with disabilities must remain at the core of the family outcomes system. To ensure that family outcomes and indicators are "family-friendly" and assist families in assessing their own progress, families should be involved as partners in the development of the outcomes system. To this end, OSEP should consider including parents of children with disabilities on any advisory groups that help inform the development of an early childhood outcomes system. Other avenues to solicit parent input on a regular basis throughout the development process and life of the outcomes system should also be explored. Focus groups with families across California have highlighted a clear message to system developers that "families do not feel that the accountability should fall on them, but that programs have to be accountable to children and families" (Kuschner, email communication to AIR, 2003). Sensitivity to questions of accountability at the program versus family level, such as "Are we measuring families or are we measuring changes in programs that make a difference in what families and children do?" must be kept in the forefront as a system design issue.
- 4) **Viewing children within the context of their family.** One key element for the design of a family outcomes system is the working definition of what constitutes a family. The outcomes and indicators should not view the parents and siblings as separate from the child whom the program is designed to assist. Each family and family constellation is unique and the ability to enhance family capacity is contingent on viewing the family as a whole. The outcomes and indicators must be designed with this concept in mind.

- 5) **Measurement challenges.** There are two issues that should be considered when developing family outcome measures. First, it is difficult to objectively measure family outcomes since the best measure of whether a family goal has been met is a self-report from the family members (Bailey et al., 1998). In developing measures, it is therefore important that internal consistency be tested and that potential self-report biases be taken into account (Touiltos et al., 1990). Second, “satisfaction,” which is a frequent measure for family outcomes, is difficult to interpret because there is no baseline or standard against which families can measure their degree of satisfaction unless expectations are first assessed or the assessment is done over time (Bailey et al., 1998). Consideration should be given to developing measures that examine short-, intermediate- and long-term outcomes.

## Overview of Appendices

This report is accompanied by the following appendices:

**Appendix A: Child Outcome Standards Table.** This table provides an overview of child outcome standards being implemented at the state level, as well as other national or research-based standards related to child outcomes (e.g., Head Start Outcomes Framework). To the extent possible, information is included regarding how the standards apply to children with disabilities.

**Appendix B: Child Outcome Domains, Comparisons Across Five Systems.** This set of tables maps the OSEP-sponsored focus group recommended child outcome domain areas against four other child outcome standard systems. Each table represents a specific domain (e.g., social-emotional, physical development, etc.). The tables display the types of constructs measured by each system. Accompanying each table is a brief description identifying the commonalities and differences across the systems.

**Appendix C: Child Outcome Measurement Tools.** This table displays a list of available measurement tools related to child outcomes. While this list is not intended to be exhaustive, it reviews a selected set of instruments and is organized into three major sections: 1) tools that measure one of the six core areas of child development identified by the OSEP-sponsored focus group, 2) “comprehensive” instruments currently in use by states or other entities that assess one or more of the core areas, and 3) assessments that are not recommended due to concerns about their technical adequacy.

**Appendix D: Summary of Nine Family Outcome Systems.** This is a more detailed description of the nine family outcome frameworks referenced in this report. It illustrates the various approaches, formats and level of detail across these frameworks.

**Appendix E: Family Outcome Measurement Tools.** This table displays a list of measurement tools related to family outcomes. As shown, these tools are significantly more specific than those listed in the Child Measurement Tools table. Researchers have developed numerous data collection tools to gather information on specific constructs (e.g., parental stress level, family functioning, parent-child relationships), and there are a limited set of instruments that are inclusive of multiple family constructs.

**Appendix F: 2003 APR Summary Table.** This table summarizes state responses to Indicator CE.3(b) on their most recent Annual Performance Report to OSEP. The table displays the availability of child outcome data, current data available, and future plans to collect child outcome data.



## Bibliography

Abidin, Richard. (1983). *Parenting Stress Index*. Charlottesville, VA: Pediatric Psychology Press and Educational Testing Service.

American Institutes for Research. (2003, July). *Tasks Supporting OSEP Groundwork for the Early Childhood Outcomes Center* (Technical Proposal). Washington, DC: Author.

Arizona Department of Education. (2003). *Arizona Early Childhood Education Standards*. Phoenix, AZ: Author. Available on-line:  
<http://www.ade.state.az.us/earlychildhood/downloads/ECE-Standards.pdf>

Arkansas Division of Child Care and Early Childhood Education. (1999). *Arkansas Early Childhood Education Framework: Benchmarks with Strategies/Activities for Three and Four Year Old Children*. Little Rock, AR: Author.

Aytch, L.S., Cryer, D., Bailey, D.B., & Selz, L. (1999). Defining and assessing quality in early intervention programs for infants and toddlers with disabilities and their families: Challenges and unresolved issues. *Early Education and Development, 10*, 7-23.

Bailey, D.B., Jr., McWilliam, R.A., Darkes, L.A., Hebbeler, K., Simeonsson, R.J., Spiker, D., & Wagner, M. (1998, Spring). Family outcomes in early intervention: A framework for program evaluation and efficacy research. *Exceptional Children, 64*(3), 313-316.

Becker, H.J., & Epstein, J.L. (1982). Parent involvement: A survey of teacher practices. *Elem Sch J, 83*, 85-102.

Bergeson, T. (2002, June). *Framework for Achieving the Essential Academic Learning Requirements in Reading, Writing, and Communication: Birth to Five Years*. Olympia, WA: Washington Office of the Superintendent of Public Instruction. Available on-line:  
<http://www.k12.wa.us/CurriculumInstruct/pubdocs/birth-to-5.pdf>

Bricker, D., & Squires, J. (1999). *Ages & Stages Questionnaires: A Parent-Completed, Child-Monitoring System* (2<sup>nd</sup> ed.). Baltimore, MD: Paul H. Brookes Publishing Co.

Bricklin, B. (1990). Parent awareness skills survey. Doylestown, PA: Village Publishing. Available on-line: [http://www.nnfr.org/eval/bib\\_ins/BRICKLIN.html](http://www.nnfr.org/eval/bib_ins/BRICKLIN.html)

Brigance, A.H. (1991). *Brigance Inventory of Early Childhood Development – Revised*. North Bellerica, MA: Curriculum Associates, Inc. Available on-line:  
<http://www.curricassoc.com/order/newproduct.asp?title=BrigIED&Type=SCH&CustId=2078687323908271400433>

Caldwell, B.M., & Bradley, R.H. (1984). *Home observation for measurement of the environment*. Little Rock, AR: University of Arkansas.

California Department of Education. (2001). *Desired Results for Children and Families: Developmental Continuum of Desired Results, Indicators, and Measures for Children from Birth to 14 Years and Families Served by CDD-funded Center-based Programs and Family Child Care Home Networks*. Sacramento, CA: Author.

Cambell, J., Cawthon, L., Keenan, T., Lyons, D., & Schragger, L. (1998, July). *Evaluation of Early Intervention in Washington State: Options and Issues* (Report Number 7.95a). Olympia, WA: Washington State Department of Social and Health Services, Research and Data Analysis, Infant Toddler Early Intervention Program.

Colorado Department of Education. (2000). *Building Blocks to Colorado's Content Standards*. Denver, CO: Author.

Cone, J D., DeLawyer, D., & Wolfe, V. (1981). The Parent/Family Involvement Index (Abstract). In P. Vandiviere & P. W. Bailey (Eds.), *Gathering information from parents*. Chapel Hill, NC: Technical Assistance Development System.

Connecticut State Board of Education. (1999). *The Connecticut Framework: Preschool Curricular Goals and Benchmarks*. Hartford, CN: Author.

Con-Powers, M., & Dixon, S. (2001, May). *First Steps Statewide Evaluation System*. Bloomington, IN: Indiana Institute on Disability and Community, Early Childhood Center.

Coplan, J. (n.d.). *Early Language Milestone Scales* (2<sup>nd</sup> ed.). Austin, TX: PRO-ED. Available online:  
<http://buros.unl.edu/buros/jsp/lists.jsp?letter=E>

Delaware Department of Education. (2003, March). *Early Learning Foundations for School Success*. Dover, DE: Author.

Dodge, D.T., & Colker, L.J. (2000). *Creative Curriculum for Early Childhood*. Washington, DC: Teaching Strategies, Inc.

Dunst, C.J., Cooper, C.S., Weeldreyer, J.C., Synder, K.D., & Chase, J.H. (1988). Family Needs Scale. In C.J. Dunst, C.M. Trivette, & A.G. Deal (Eds.), *Enabling and empowering families: Principles and guidelines for practice*. Cambridge, MA: Brookline Books.

Early Childhood Research Institute on Measuring Growth and Development. (1998, April). *Family Outcomes in a Growth and Developmental Model*. Minneapolis, MN: University of Minnesota, Early Childhood Research Institute.

Easterbrooks, M.A., & Goldberg, W.A. (1984). Toddler development in the family: Impact of father involvement and parenting characteristics. *Child Development*, 55, 740-752.

Epstein, A.S. (1980). *Assessing the child development information needed by adolescent parents with very young children* (final report, Grant No. 90-C-1321, US Dept. HHS). Ypsilanti, MI: High/Scope.

Epstein, J.L. (1985a). Parents' reactions to teacher practices of parent involvement. *Elem Sch J*, 86, 277-294.

Epstein, J.L. (1985b). A question of merit: Principals' and parents' evaluations of teachers. *Educ Res*, 14, 3-10.

Epstein, J.L. (in press). Effects on students' achievement of teachers' practices of parent involvement. In S. Silvern (Ed.), *Literacy through family, community, and school interaction*. Greenwich, CT: JAI.

Field, T. (1980). Early development of infants born to teenage mothers. In K. Scott, T. Field, & E. Robertson (Eds.), *Teenage parents and their offspring* (pp. 145-175). New York: Grune & Stratton.

Florida Partnership for School Readiness. (2002). *Florida School Readiness Performance Standards for Three-, Four-, and Five-Year-Old Children*. Tallahassee, FL: Author.

Georgia Office of School Readiness. (2001). *Georgia Pre-Kindergarten Program Learning Goals*. Atlanta, GA: Author.

Georgia Office of School Readiness. (2003). *Office of School Readiness, Georgia Pre-K Program Content Standard.s* Atlanta, GA: Author.

Georgia State University, Metropolitan Atlanta P-16 Community Council, Office of School Readiness. (1999). *Pre-K and Kindergarten Academic Standards*. Atlanta, GA: Author. Available on-line: <http://education.gsu.edu/p16/prekintro.pdf>

Harbin, G.L., Kameny, R., Pelosi, J., Kitsul, Y., & Fox, R. (2002, July). *Identifying Desired Outcomes of Early Intervention: Executive Summary*. Chapel Hill, NC: University of North Carolina, Frank Porter Graham Child Development Institute.

Head Start Bureau. (2000). *Head Start Child Outcomes Framework*. Available on-line: <http://www.kaplanco.com/includes/content/classroom/UGCOF.pdf>

Head Start Bureau. (2003, April). *The National Reporting System* (an information brief from the Associate Commissioner). Washington, DC: U. S. Department of Health and Human Services. Available on-line: <http://www2.acf.dhhs.gov/programs/hsb/InFocus/nrs.htm>

Head Start Bureau. (2003, July). The Head Start Child Outcomes Framework. *Head Start Bulletin*, 76, 21-25. Available on-line: <http://www.headstartinfo.org/pdf/Outcomes.pdf>

Head Start Bureau. (2003, July). Setting the Context for the National Reporting System. *Head Start Bulletin*, 76, 13-15. Available on-line: <http://www.headstartinfo.org/pdf/Outcomes.pdf>

Head Start Bureau. (2003, July). What kinds of questions will children be asked on the NRS?. *Head Start Bulletin*, 76, 20. Available on-line: <http://www.headstartinfo.org/pdf/Outcomes.pdf>

Head Start FACES Parent Interview. (2003). Available on-line: [http://www.acf.hhs.gov/programs/core/pubs\\_reports/faces/meas\\_one\\_app\\_a.html](http://www.acf.hhs.gov/programs/core/pubs_reports/faces/meas_one_app_a.html)  
<http://a257.g.akamaitech.net/7/257/2422/14mar20010800/edocket.access.gpo.gov/2003/03-20260.htm>

Herren, J.K. (2003, July). Head Start child outcomes: Setting the context for the national reporting system. *Head Start Bulletin*, 76, 3-4. Available on-line: <http://www.headstartinfo.org/pdf/Outcomes.pdf>

High/Scope Foundation. (2003). *The High/Scope Child Observation for Infants/Toddlers (COR)*. Ypsilanti, MI: Author.

High/Scope Foundation. (2003). *The Preschool Child Observation Record (COR) (2<sup>nd</sup> ed.)*. Ypsilanti, MI: Author. Available on-line: <http://www.highscope.org/Assessment/cor.htm>

Hill, W.M. (2003, July). The National Reporting System: What is it and how will it work? *Head Start Bulletin*, 76, 7-9. Available on-line: <http://www.headstartinfo.org/pdf/Outcomes.pdf>

Hoffman, J., & Herren, J.K. (2003, July). How child outcomes assessment supports continuous program improvement. *Head Start Bulletin*, 76, 26-28. Available on-line: <http://www.headstartinfo.org/pdf/Outcomes.pdf>

Horn, E., & Childre, A. (2004, in press). Assessing adaptive behavior. In M. McLean, M. Wolery, & D. Bailey (Eds.), *Assessing infants and preschoolers with special needs* (pp. 487-516). Upper Saddle River, NJ: Pearson Merrill Prentice Hall Publishing Co.

Horn, W.F. (2003, July). Improving Head Start: A common cause. *Head Start Bulletin*, 76, 5-6. Available on-line: <http://www.headstartinfo.org/pdf/Outcomes.pdf>

Idaho State Department of Education. (2003, March). *Idaho Early Learning Standards: A Resource Guide* (draft). Boise, ID: Author. Available on-line: <http://www.sde.state.id.us/SpecialEd/docs/content/IdahoEarlyLearningStandards.doc>

Illinois State Board of Education. (2002). *Resources on Early Learning: Illinois Early Learning Standards*. Springfield, IL: Author, Division of Early Childhood Education.

Indiana Department of Education. (2002). *Foundations for Young Children to the Indiana Academic Standards*. Indianapolis, IN: Author, Division of Prime Time.

Indiana Family & Social Services Administration (FSSA), First Steps. (2002). *Family Interview*. Available on-line: [http://www.in.gov/fssa/first\\_step/pdf/familyinterview.pdf](http://www.in.gov/fssa/first_step/pdf/familyinterview.pdf)

Italiano-Thomas, G. (2003, July). The national reporting system and English language learners. *Head Start Bulletin*, 76, 18-19. Available on-line: <http://www.headstartinfo.org/pdf/Outcomes.pdf>

Kuschner, A. (2003). *DR access Outcomes Workgroup*. Rohnert Park, CA: Sonoma State University, California Institute on Human Services.

Lofaro, N. (2003, July). Resources. *Head Start Bulletin*, 76, 31-32. Available on-line: <http://www.headstartinfo.org/pdf/Outcomes.pdf>

Louisiana Department of Education. (2002). *Louisiana Standards for Programs Serving Four-Year-Old Children*. Baton Rouge, LA: Author, Office of Student and School Performance, Division of Student Standards and Assessments.

Love, J.M. (2001, December). *Instrumentation for state readiness assessment: Issues in measuring children's early development and learning* (draft). Paper presented at the Assessing the State of the State Assessments Symposium, Atlanta, GA. Available on-line: <http://www.mathematica-mpr.com/PDFs/assapaper.pdf>

Luchasson, R., Borthwock-Duffy, S., Buntinx, W., Coulter, D.L., Craig, E.M., Reeve, A., Schalock, R.L., Snell, M.E., Spitalnik, D.M., Spreat, S., & Tasse, M.J. (2002). *Mental retardation: Definition, classification, and systems of support* (10<sup>th</sup> ed.). Washington, DC: American Association on Mental Retardation.

Lund, I., Rous, B., Moffett, C.L., Wood, K., & O'Keefe, H. (2002). *State Profiles on Pre-Kindergarten Standards and Accountability Systems*. Lexington, KY: University of Kentucky, State Preschool Accountability Research Collaborative (SPARC). Available on-line: <http://www.ihdi.uky.edu/Sparc/states/Intro.pdf>

Maine Department of Education. (1997). *Learning Results*. Augusta, ME: Author.

Maine Department of Education. (1999). *Birth to Five Early Learning Results*. Augusta, ME: Author.

Maryland State Department of Education. (2001). *The Maryland Model for School Readiness (MMSR): "Readiness" Outcomes and Indicators*. Baltimore, MD: Author.

Maryland State Department of Education. (2002). *MSDE Representative Examples Manual Prekindergarten and Kindergarten Content Standards*. Baltimore, MD: Author.

Mash, E., Terdal, L., & Anderson, K. (1981). The response-class matrix: a procedure for recording parent-child interactions. In R.A. Barkley (Ed.), *Hyperactive children* (pp.419-436). New York: Guilford.

Massachusetts Department of Education. (2001). *Massachusetts Curriculum Framework*. Malden, MA: Author.

Massachusetts Board of Education, Early Childhood Advisory Council. (2001). *Early Childhood Program Standards for Center-Based Programs for Three- and Four- Year Olds* (draft). Malden, MA: Author.

MacPhee, D. (1981). *Knowledge of Infant Development Inventory and Catalog of Previous Experience with Infants*. Princeton, NJ: Educational Testing Service.

McConnell, S., McEvoy, M., Carta, J.J., Greenwood, C.R., Kaminski, R., Good, R.H., III, & Shinn, M. (1998). *Family Outcomes in a Growth and Development Model* (Technical Report #7). Minneapolis, MN: University of Minnesota, Early Childhood Research Institute on Measuring Growth and Development. (ERIC Document Reproduction Service No. ED452641)

McWilliam, P.J., & Winton, P. (1991). *Brass Tacks. Part II. Individual Interactions with Families*. Chapel Hill, NC: The University of North Carolina, Frank Porter Graham Child Development Center.

Meisels, S.J., & Atkins-Burnett, S. (2000). The elements of early childhood assessment. In J.P. Shonkoff, & S.J. Meisels (Eds.), *Handbook of Early Childhood Intervention* (2<sup>nd</sup> ed., pp.231-257). Cambridge, UK: Cambridge University Press.

Meisels, S.J., Jablon, J.R., Marsden, D.B., Dichtelmiller, M.L., Dorfman, A.B., & Steele, D.M. (1995). *The Work Sampling System: An Overview*. Ann Arbor, MI: Rebus Planning Associates, Inc.

Meisels, S.J., Marsden, D, Dombro, A, Weston, D, & Jenkins, A. (2003). *The Ounce Scale*. Pearson Learning Center.

Michigan State Board of Education. (1992). *Early Childhood Standards of Quality for Prekindergarten Through Second Grade*. Lansing, MI: Author, Early Childhood Education, Parenting, and Comprehensive School Health Unit.

Minnesota Department of Children, Families, and Learning. (2000). *Minnesota Early Childhood Indicators of Progress: A Resource Guide*. Roseville, MN: Author.

Minnesota Department of Health, Maternal and Child Health/Family Health. (2002). Nursing Child Assessment Satellite Training (NCAST). St. Paul, MN: Author. Available on-line: <http://www.health.state.mn.us/divs/fh/mch/ncastinfo.html#ncast-pub>

Mississippi Department of Education. (2001). *Mississippi Pre-kindergarten Curriculum Including Benchmarks, Informal Assessments and Suggested Teaching Strategies*. Jackson, MS: Author.

Missouri Department of Elementary and Secondary Education, Early Childhood Section. (2001). *Missouri Pre-K Literacy Standards*. Jefferson City, MO: Author.

The National Association for the Education of Young Children (NAEYC) & The National Association of Early Childhood Specialists in State Departments of Education (NAECS/SDE). (2002). *Early Learning Standards: Creating the Conditions for Success*. Washington, DC: Author.

The National Association for the Education of Young Children (NAEYC) & The National Association of Early Childhood Specialists in State Departments of Education (NAECS/SDE). (2003). *Early Childhood Curriculum, Child Assessment, and Program Evaluation: Building an Accountable and Effective System for Children Birth Through Age Eight* (draft). Washington, DC: Author. Available on-line: [http://www.naeyc.org/resources/position\\_statements/Position\\_Statement\\_2003.pdf](http://www.naeyc.org/resources/position_statements/Position_Statement_2003.pdf)

National Association of School Psychologists (NASP). (2002). *Position statement on early childhood assessment*. Bethesda, MD: Author. Available on-line: [http://www.nasponline.org/information/pospaper\\_eca.html](http://www.nasponline.org/information/pospaper_eca.html)

National Center for Early Development & Learning (NCEDL). (in development). *Early Intervention Services Assessment Scale (EISAS)*. Chapel Hill, NC: University of North Carolina. Website: <http://www.ncedl.org/>



- National Center on Educational Outcomes (NCEO). (1993). *Educational Outcomes and Indicators for Early Childhood (Age 3)*. Minneapolis, MN: University of Minnesota.
- National Education Goals Panel. (1999). *The National Education Goals Report: Building a Nation of Learners*. Washington, DC: Author.
- New Jersey State Department of Education. (2002). *Early Childhood Education Program Expectations: Standards of Quality*. Trenton, NJ: Author.
- Niemayer, J., & Scott-Little, C. (2002). *Assessing Kindergarten Children: A Compendium of Assessment Instruments*. Greensboro, NC: University of North Carolina, SERVE.
- O'Brien, J. (2003, July). The national reporting system and Head Start children with disabilities. *Head Start Bulletin*, 76, 16-17, 33. Available on-line: <http://www.headstartinfo.org/pdf/Outcomes.pdf>
- Office of Early Intervention and School Readiness & Bureau of Student Services and Exceptional Education. (1994). *Prekindergarten Assessment and Training for the Handicapped: Infants and Toddlers Screening, Evaluation and Assessment*. Tallahassee, FL: Florida Department of Education.
- Office of the Superintendent of Public Instruction. (2001). *Birth to Five Framework for Achieving the Essential Academic Learning Requirements in Reading, Writing and Communication*. Olympia, WA: Author.
- Ohio Department of Education. (2002). *Connections: An Early Childhood Education Curriculum Framework for Continuity*. Columbus, OH: Author.
- Oklahoma State Department of Education. (2003). *Developmental Skills*. Oklahoma City, OK: Author.
- Olson, D.H., Portner, J., & Lavee, Y. (1985). Family Adaptability and Cohesion Evaluation Scales. St. Paul, MN: University of Minnesota, Family Inventories Project.
- Oregon Department of Education, Office of Special Education. (2002). *Early Intervention/Early Childhood Special Education (EI/ECSE)*. Portland, OR: Author.
- Parks, P., & Smerigliio, V. (1983). Parent knowledge among adolescent mothers. *J Youth Ado Health Care*, 4, 163-167.
- Parks, P.L., & Smerigliio, V.L. (1986). Relationships among parenting knowledge, quality of stimulation in the home and infant development. *Fam Relat*, 35, 411-416.
- Pearson Early Learning. (2003). *The Ounce Scale Assessment System*. Available on-line: <http://www.pearsonearlylearning.com/OunceScale.htm>
- Pennsylvania Department of Education & Pennsylvania Association of Intermediate Units. (2001). *Early Childhood Learning Continuum Indicators*. Harrisburg, PA: Author.
- Plutro, M. (2003, July). Are you ready for the NRS? *Head Start Bulletin*, 76, 29-30. Available on-line: <http://www.headstartinfo.org/pdf/Outcomes.pdf>

Psychological Assessment Resources. (1994). Parenting Stress Index (PSI) (Software System). Odessa, FL: Author.

Rhode Island Department of Elementary and Secondary Education. (2002). *Rhode Island Early Learning Standards*. Providence, RI: Author.

Rickard, K.M., Graziano, W., & Forehand, R. (1984). Parental expectations and childhood deviance in clinic-referred and non-clinic children. *J. Clin Child Psych*, 13, 179-186.

Roberts, R. N., Innocenti, M. S., & Goetze, L. (1997). *By what outcomes should Part H be evaluated at the state level?* Washington, DC: Subcommittee on Service Integration and Continuity of Services of the Federal Interagency Coordinating Council.

Roberts, R.N., Innocenti, M.S., & Goetz, L.D. (1999, Spring). Emerging issues from state level evaluations of early intervention programs. *Journal of Early Intervention*, 22(2), 152-163.

Roehling, P., & Robin, A. (1986). Development and validation of the Family Beliefs Inventory: A Measure of unrealistic beliefs among parents and adolescents. *J Cons Clin Psy*, 5, 693-697.

Schultz, T. (2003, July). Developing the National Reporting System. *Head Start Bulletin*, 76, 10-12, 33. Available on-line: <http://www.headstartinfo.org/pdf/Outcomes.pdf>

Scott-Little, C., Kagan, S.L., & Frelow, V.S. (2003). *Standards for Preschool Children's Learning and Development: Who Has Standards, How Were They Developed, and How Are They Used? Executive Summary*. Greensboro, NC: University of North Carolina, SERVE.

Shami, M., Bauman, W., Jackson, S., & McInerney, M. (2003, February). *OSEP Early Childhood Outcomes and Indicators Focus Group* (draft). Washington, DC: U.S. Department of Education, Office of Special Education Programs, Division of Research Practice.

Shonkoff, J.P., & Meisels, S.J. (Eds.). (2000). *Handbook of Early Childhood Intervention* (2<sup>nd</sup> ed.). Cambridge, UK: Cambridge University Press.

South Carolina State Department of Education, Office of Curriculum and Standards. (2000). *Mathematics Curriculum Standards*. Columbia, SC: Author.

South Carolina State Department of Education, Office of Curriculum and Standards. (2002). *Language Arts Curriculum Standards*. Columbia, SC: Author.

State of Vermont, Department of Education. (2000). *Vermont's Framework of Standards and Learning Opportunities*. Montpelier, VT: Author.

Strom, R.D. (1984, 1995). *Parent as Teacher Inventory*. Bensenville, IL: Scholastic Testing Service. Available on-line: <http://www.ststesting.com>

Texas Education Agency. (1999). *Prekindergarten Curriculum Guidelines*. Austin, TX: Author.

Touliatos, J., Perlmutter, B.F., & Straus, M.A. (Eds.). (1990). *Handbook of Family Measurement Techniques*. Newbury Park, CA: SAGE Publications, Inc.



U.S. Department of Education, Planning and Evaluation Service. (1998). *Even Start: Evidence from the Past and a Look to the Future*. Washington, DC: Author.

U. S. Department of Health and Human Services. (2002, June). *Early Childhood Education and School Readiness: Conceptual Models, Constructs, and Measures* (Workshop Summary, June 17-18, 2002). Washington, DC: Author. Available on-line: <http://www.nichd.nih.gov/crmc/cdb/Kyle-workshop.pdf>

University of Delaware. (2002, April). *Investing in Better Outcomes: The Delaware Early Childhood Longitudinal Study*. Newark, DE: Author, Center for Disabilities Studies. Available on-line: <http://www.udel.edu/cds/>

University of New Mexico Center for Family and Community Partnerships. (2000). *Developmental Milestones in the Focused Portfolio Assessment System*. Albuquerque, NM: Author.

The University of the State of New York & The State Education Department. (2002). *Early Literacy Guidance Prekindergarten – Grade 3*. Albany, NY: The State Education Department.

Utah State Office of Education. (2000). *Pre-K Standards* (guidelines). Salt Lake City, UT: Author.

Virginia Department of Education. (2003). *Virginia's Foundation Blocks for Early Learning: Guidelines for Literacy and Mathematics*. Richmond, VA: Author, Office of Elementary Instructional Services.

Washington Community Trade and Economic Development, Children's Services, Community Services Division. (1999). *Washington State's Early Childhood Education and Assistance Program Outcomes Selected for New Evaluation Design*. Olympia, WA: Author.

Weinraub, M., & Wolf, B. (1983). Effects of stress and social supports on mother-child interactions in single- and two-parent families. *Child Dev*, 54, 1297-1311.

Wetherby, A.M., & Prizant, B.M. (2001). *Communication and Symbolic Behavior Scales-Development Profile (CSBS-DP)*. Baltimore, MD: Paul H. Brookes Publishing Co. Available on-line: [http://firstwords.fsu.edu/pdf/Checklist\\_Scoring\\_&\\_Cutoffs.pdf](http://firstwords.fsu.edu/pdf/Checklist_Scoring_&_Cutoffs.pdf)

Wyoming Department of Education. (2002). *Early Childhood Readiness Standards*. Cheyenne, WY: Author. Available on-line: [http://www.k12.wy.us/specialprograms/Docs/early\\_childhood\\_standards.pdf](http://www.k12.wy.us/specialprograms/Docs/early_childhood_standards.pdf)