CHAPTER SIX:

CHILD OUTCOMES MEASURES

CHAPTER SIX: CHILD OUTCOMES AND MEASURES BY TABLE NUMBER

Table Number and Measures	Child Outcomes (OCCF Database Numbers)
Section 1: Health Including Prenatal and Other Health Care	
Table 6-1: Perinatal Care and Infant Outcomes Measures ..... (page 6-7)	• Prenatal care (2.1.1; 3.9.7) • Perinatal care (2.1.2) • Normal birth weight (2.1.8; 3.9.11) • Full-term delivery (2.1.9; 3.9.12) • Preventive care for newborn infants (2.1.7; 3.9.13)
Table 6-2: Maternal Knowledge, Behavior, & Health During Pregnancy Measures ..... (page 6-8)	• Health status of expectant mothers (2.1.3) • Health behaviors of expectant mothers (2.1.4; 3.9.10) • Avoidance of alcohol, tobacco, or non-prescription drugs during pregnancy (2.1.6; 3.9.9) • Knowledge of prenatal and perinatal health issues (2.1.5; 3.9.9)
Table 6-3: Child Nutrition and Physical Activity Measures ..... (page 6-9)	• Breast-feeding (2.2.4) • Nutritional intake and status (2.2.5) • Nutritional knowledge and practices (2.2.6) • Physical activity participation (2.2.7)
Table 6-4: Child Health Status and Health Care Measures..... (page 6-10)	• Good health status (2.2.1) • Health and dental care adequacy (2.2.2) • Immunization rates (2.2.3)
Section 2: Development, Peer Relationships and Well-Being	
Table 6-5: Comprehensive Measures of Age-Appropriate Growth and Development (page 6-13).....	• Multiple Outcomes
Table 6-6: Emergent Literacy Skills Measures ..... (page 6-18)	• Emergent literacy skills (2.3.4)

Table Number and Measures	Child Outcomes (OCCF Database Numbers)
Table 6-7: Child Social Skills and Relationships ..... (page 6-21)	• Age-appropriate social skills (2.5.1) • Age-appropriate self-control (2.5.4) • Conflict resolution and anger management skills (2.5.3) • Peer interaction quality (2.5.5)
Table 6-8: Problematic Behavior..... (p. 6-24)	• Aggression and anti-social behavior (2.5.2)
Section 3: Child Environments	
Table 6-9: Environmental Health & Safety Measures ..... (page 6-26)	• Healthful environments (2.2.8) • Safe environments (2.4.1) • Safety practices (2.4.2)
Table 6-10: Television Viewing Measures ..... (page 6-27)	• Limited television viewing (2.4.3) • TV viewing with interactive adult(s) (2.4.4)

Also see Tables 9-1 and 9-2 (Chapter 9) for learning environment measures.

Chapter Six: Child Outcomes Measures

Healthy, thriving children show normal growth and gain developmentally appropriate physical, behavioral, emotional, and social competencies throughout their childhood. In this chapter, measures for outcomes of importance to young children's normal growth and development are presented in three sections:

Section 1: Health including prenatal and other health care

Section 2: Development, peer relationships, and personal well-being

Section 3: Child environments

Other measures that are relevant to outcomes of programs serving children are found in

- Chapter 5, Family Outcomes,
- Chapter 7, Youth Outcomes,
- Chapter 8, Educational Outcomes, and
- Chapter 9, Child Care and Youth Environments.

NOTE:

Surveys, interviews, and rating scales are emphasized in this chapter because they are the most widely published measures. These measures are NOT the only way to assess outcomes. Remember to consider focus groups, program records, case plans and progress notes, goal attainment scaling, portfolios, systematic observations, and other measures! See Chapter 3 for more ideas.

Section 1: Health Including Prenatal and Other Health Care

Good health is essential to children's development. The foundation for good health is built in the first three years of life. This is a period when children are most vulnerable to disease, injury, and nutritional deficits that can have life-long effects on their physical and psychological health. Adequate nutrition and preventive health care, including prenatal care and immunization, are particularly important.

Program outcomes that address physical health and well-being of children include adequate or improved:

- Perinatal care and infant outcomes
- Maternal knowledge, behavior, and health during pregnancy
- Child nutrition and physical activity
- Child health status and health care

Specific measures of these outcomes are reviewed in Tables 6-1 to 6-4 of this chapter.

Measures of Perinatal Care and Infant Outcomes

The term *perinatal care* describes the full range of services provided during the prenatal and postnatal periods. Early, comprehensive *prenatal care* is defined as beginning before the 3rd month or 12 weeks of gestation and including five or more prenatal checkups. Prenatal care should include linkage to needed social services, health education and promotion, planning for the delivery, and medical or psychosocial interventions and follow-up when appropriate.

Full-term deliveries are most likely to produce normal birth weight babies. Babies born before 37 completed weeks of gestation are considered pre-term births. In Oregon in 1996, the number of babies born with low birth weight averaged 53.5 per 1000 births. *Low birth weight* is defined as less than 2,500 grams (or 5 pounds, 8 ounces) with two sub-groupings:

- Moderately low birth weight: 1500 to 2500 grams (or 3 lb., 5 oz. to 5 lb., 8 oz.)
- Very low birth weight: 500 to 1500 grams (or 1 lb., 2 oz. to 3 lb., 5 oz.)

Post-partum care typically extends into the 4th trimester or longer and may include a needs assessment, counseling on breast feeding, and health education for new mothers regarding (1) infant health and development, (2) accident and disease prevention, and (3) home safety. Measurement focuses on accessibility and utility of these services.

Finally, *preventive care* for newborn infants involves regular health check-ups and necessary treatments both before and after the infant leaves the hospital or other birthing clinic or home.

Specific program outcomes (Table 6-1) focused on perinatal care and early infant outcomes include adequate or improved:

- **Prenatal care (2.1.1; 3.9.7)**
- **Perinatal care (2.1.2)**
- **Preventive care for newborn infants (2.1.7; 3.9.13)**
- **Normal birth weight (2.1.8; 3.9.11)**
- **Full-term delivery (2.1.9; 3.9.12)**

Table 6-1: Perinatal Care and Infant Outcome Measures

Type	Measure	Description
Records	**Birth Certificates**	County and state statistics from birth certificates identify the number of mothers receiving first trimester prenatal care by maternal age, education, county of residence, race/ethnicity, and child birth weight.
	High Risk Infant Tracking Database Oregon Health Division (OHD**)**	The Oregon Health Division's High Risk Infant Tracking Database details information on prenatal and early infant health conditions including low birth weight, gestational age, and numerous medical conditions. For information on this record source, contact Sue Omel, Oregon Health Division, (503) 731-4021.
Records	**Prenatal and Perinatal Service Records**	Review health service records for characteristics of prenatal care, such as timing of service initiation, number of checkups, and access to other services. Records can also identify infants and mothers who receive comprehensive postnatal services. Records may identify specific services received by families, such as home visitation, breast-feeding consultations, informational packets, needs and referral assessment.
Provider Assessment Survey	**Oregon Healthy Start Evaluation - Family Intake and Family Update *** Oregon State University, Family Policy Program, 1997	This questionnaire is used by service providers in Oregon Healthy Start to describe families with newborn children, including their prenatal care. One sample question is: "What prenatal care has mother had?" (1) Early comprehensive prenatal care (beginning before 3rd month or 12 weeks gestation with five or more checkups); (2) Inadequate prenatal care (beginning at or after 3rd month and/or including less than five checkups); (3) No prenatal care. Other questions address the health status of newborn children, passive smoke exposure, toxic drug screens, and preventive care.
Parent Interview	**Barriers to Prenatal Care** Oregon Adult and Family Services	This semi-structured interview, developed by Oregon Adult and Family Services, asks mothers who did *not* see a medical professional during the first trimester of pregnancy to describe their prenatal care. Questions asked are: "You did not see a medical professional during the first three months of this pregnancy. Can you tell me why you did not receive care during this time?" "During your pregnancy you had (#) prenatal visits. Can you tell me why you did not see a medical professional more often?" If woman is receiving Medicaid: "Can you think of any ways that the (AFS) system could be improved to assure that pregnant women on Medicaid receive adequate prenatal care?"
Focus Group Interview	**Focus Group Interview***	Focus group interviews are an effective means to learn about people's experiences with services. Applied to pregnancy care, pregnant and/or new mothers can be interviewed regarding their prenatal and perinatal care experiences. Guidelines for focus groups are found in Chapter 3 and in the appendix, *Focus Group Interviews*.
Parent Survey	**Satisfaction Survey***	A standard satisfaction survey can be adapted to focus on the actual services provided by program or available in the community. For example, families can report on the accessibility and utility of perinatal or other services. See Chapters 4 for guidelines on survey development. Also see a generic *Satisfaction Survey* in the Appendix.

***** Included in appendix.

Measures of Maternal Knowledge, Behavior, and Health During Pregnancy

The health status and health behaviors of pregnant mothers directly affect their children's well-being. Good health during pregnancy is associated with a healthy, full-term baby with normal birth weight. Of particular importance during pregnancy are adequate nutritional intake for both mother and infant, and the avoidance of alcohol, tobacco and other non-prescription drugs.

The health status of expectant mothers is threatened by various conditions including inadequate weight gain, calcium deficits, the use of drugs, alcohol, and tobacco, high blood pressure and toxemia, and pregnancy-related diabetes. Because cigarette smoking is the single most important known cause of low birth weight and infant mortality, assessing this parent behavior is crucial. Exposure to second-hand smoke is also important to the health of mothers, infants, and children.

Program outcomes associated with pregnant mothers' health include adequate or improved:

- **Health status of expectant mothers (2.1.3)**
- **Health behaviors of expectant mothers (2.1.4; 3.9.10)**
- **Avoidance of alcohol, tobacco, or non-prescription drugs during pregnancy (2.1.6; 3.9.9)**
- **Knowledge of prenatal and perinatal health issues (2.1.5; 3.9.9)**

Table 6-2: Maternal Knowledge, Behavior, and Health Measures

Type	Measure	Description
Records	**Maternal Health Records**	Review records to determine health status of expectant mothers and health behaviors during pregnancy.
Provider Assessment Survey	**Oregon Healthy Start Evaluation - Family Intake and Family Update*** Oregon State University, Family Policy Program, 1997	This questionnaire is used by service providers in Oregon Healthy Start to describe families with newborn children, including their prenatal care. For example, questions address comprehensive prenatal care, health status of newborn children, passive smoke exposure, toxic drug screens, breast-feeding, and preventive care. See Table 6-1 for more information.
Mother Interview	**Maternal Health and Behavior During Pregnancy**	Programs may interview mothers regarding their health behaviors and status during pregnancy. Such interviews should include questions about: • weight gain, nutrition and vitamin intake, • frequency, timing and amount of smoking, exposure to passive smoking (such as living with a smoker), alcohol consumption, other drug use, and • health conditions such as toxemia, diabetes, or other conditions that affect birth outcomes. Because these conditions are highly technical, health care professionals must be involved in development of specific measures and assessments.

*Included in appendix

Table 6-2: Maternal Knowledge, Behavior and Health Measures (continued)

Type	Measure	Description
Parent Survey	**Knowledge of Health Issues in Pregnancy**	If they are to be useful, knowledge tests or quizzes must parallel the *specific* educational content offered, such as knowledge of prenatal development or labor and delivery. For this reason, generic knowledge tests or quizzes must be carefully adapted to specific programs. Chapter 4 provides guidelines for creating knowledge tests. Also see examples in appendix under "Knowledge…"

***** Included in appendix

Measures of Child Nutrition and Physical Activity Outcomes

Healthy infants and children should have adequate nutritional intake and eating habits. In addition, infants and children need daily physical activity that involves age-appropriate, safe exploration, and large-muscle play. As infants and children grow, these activities involve rolling, standing, throwing, kicking, running, jumping, balancing, catching, and skipping. Program outcomes that address nutrition and physical activities include adequate or improved:

- **Breast-feeding (2.2.4)**
- **Nutritional intake and status (2.2.5)**
- **Nutritional knowledge and practices among parents and children (2.2.6)**
- **Physical activity participation (2.2.7)** *(Also see next section on "Age-appropriate development," Table 6-5.)*

Table 6-3: Child Nutrition and Physical Activity Measures

Type	Measure	Description
Maternal Survey	**Breastfeeding Attitudes and Beliefs*** Baranowski et al., 1986	Mothers report on beliefs about breastfeeding on this 23-item questionnaire, including social, personal, and physical inconvenience and benefits for the child. Mothers indicate level of agreement with statements such as, "Breastfeeding causes people to have sex less," and "Breastfeeding is best for my baby."
Parent Survey	**Oregon Health Division, WIC Surveys*** **Feeding Your Infant** **Feeding Your Child** **24 Hour Diet Recall** Oregon Health Division, 1997	The Oregon WIC Program Survey uses 3 questionnaires to assess parent behaviors and child nutrition: Maternal behaviors related to feeding infants are the focus of the first questionnaire. Items assess family resources and infant feeding routines. For example, "I can tell when my baby is full and ready to stop feeding." Responses range from (5) "always" to (1) "never." The Feeding Your Child questionnaire is a self-report questionnaire that focuses on family behaviors related to feeding children and mealtime routines. Examples include: "What does your child usually eat for snacks," and "Do parents or other caregivers sit with your child at meals?" In the 24 Hour Diet Recall questionnaire, children's daily nutritional intake is assessed. Parents record the time of day, foods offered, and amounts eaten by the child, for the last 24 hours. The food recall can be adapted for use as a telephone survey.

*Included in appendix

Table 6-3: Child Nutrition and Physical Activity Measures (continued)

Type	Measure	Description
Parent Survey	**Children's Activity Questionnaire*** OSU, Family Policy Program, 1998	This is a 20-item parent questionnaire designed to assess an estimate of the actual number of hours, and the percentage of total time, a young child spends engaged in physically active pursuits during a typical weekend (or other) day when at home with a parent. Only 10 items assess physically active pursuits. Example: "Riding on a wheeled toy, tricycle, scooter or bike" and "Bouncing around on cushions, sofa, etc."
Child Survey	**Physical Activity Questionnaire*** Aaron et al., 1993, 1995	This survey asks school-aged children to list leisure sports activities in which they have participated at least 10 times in during the past year. Children estimate the time spent in each activity. Overall annual physical activity is calculated.

*Included in appendix

Measures of Child Health Status and Health Care

Good health for children is defined here as physical health that, except for normal childhood illnesses, is free from serious, chronic, or life-threatening illnesses, and illnesses due to neglectful health practices. Access to health care and well-child check-ups, dental care, and regular immunizations are essential.

Specific program outcomes related to health include adequate or improved:

- **Health status (2.2.1)**
- **Health and dental care adequacy (2.2.2)**
- **Immunization rates (2.2.3)**

Table 6-4: Child Health Status and Health Care Measures

Type	Measure	Description
Records	**Child Health or Immunization Records**	Review child health records for general health, access to health care, and immunization records. A suggested Records Extraction Form on Immunizations is included in the appendix.*
Parent Question-naire	**Your Child's Health and Safety - Adapted*** National Transition Demonstration Consortium, 1992	This questionnaire has two parts. The Health and Health Habits Questionnaire (5 items) measures parent satisfaction with the child's overall health, hygiene, and eating habits. The Child Health Checklist (8 items) is focused on overall health, vision and hearing, and can be filled out by both parents and teachers. The Child's Health History (10 items) includes children's physical, dental and vision checkups and other contacts with medical professionals, health related limitations, and receipt of early intervention services. The Safety Practices Questionnaire (12 items) includes two sub-scales. The first is focused on family practices, and the second is focused on safety characteristics of the home environment.

*Included in appendix

Table 6-4: Child Health Status and Health Care Measures (continued)

Type	Measure	Description
Provider Question-naire	**Oregon Healthy Start Evaluation - Family Update*** Oregon State University, Family Policy Program, 1997	Service providers use this 50-item questionnaire to describe families with young children. A section on health asks 14 questions about the health and nutritional status of children, adequacy of health and dental care resources for the children and their parents, and immunizations. Examples: "Does the child receive regular well-child check-ups?" and "How would you rate the child's nutrition, overall?"

*Included in appendix

Section 2: Development, Peer Relationships, and Personal Well-Being

Children's growth and development is age-appropriate when it is within a range that includes 95% of similar-aged children. The developmental rate of individual competencies varies markedly *both within and between* individuals during childhood. For example, at the age two, one child may excel at language skills but be developing slowly in fine motor skills. By three years, this child's fine motor skills may have caught up with her age peers, but she may be somewhat less precocious in language ability.

Age-appropriate development is generally assessed in the following areas:

- Physical, including gross and fine motor skills;
- Language and cognition, including reasoning, logic, spatial and mathematical concepts;
- Social, including ability to interact appropriately with peers, adults, and in groups; and
- Emotional, including a sense of security, trust, mastery, and competence.

Comprehensive Measures of Growth and Development

Program outcomes related to children's overall development include adequate or improved:

- **Age-appropriate development (2.2.10; 2.3.5; 2.4.7; 4.1.4; 4.1.5; 4.1.6)**
- **Early and periodic screening for normal growth and development (2.2.9)**
- **Early intervention for all children falling outside normal developmental ranges (2.2.11)**

Table 6-5 reviews several comprehensive measures of age-appropriate growth and development; several screening measures are included.

NOTE

Developmental screening tools are designed to show if a child's growth and development falls within the normal range or whether further evaluation is required.

- *Screening measures do not give diagnostic information about a child's developmental status and should not be used to label individual children's development as "normal" or "abnormal."*
- *Screening measures are useful to identify children who may need further assessment and possible intervention. Comprehensive screening measures can also be used to characterize the rates of development of a group of children.*

Table 6-5: Comprehensive Measures of Growth and Development

Type	Measure	Description
Record	**Records of child health and development screenings**	Review frequencies, dates, and outcomes of children's health and development screening records from health clinics, schools, doctor's offices, child care providers and preschools. A suggested Records Extraction Form is included in the appendix.*
Record	**Referrals and Receipt of Early Intervention Services**	An outcome that many programs seek is timely referral to, and receipt of, needed early intervention services for children who show abnormal growth and development. Track early intervention services by reviewing referral and service records. A suggested Records Extraction Form is included in the appendix.*
Test Interview	**Denver II: Developmental Assessment** (ages 0-6 years) Frankenburg & Dodds, 1990	The Denver II is an individually administered assessment of children, birth to 6 years of age, and measures their performance on various age-appropriate tasks. Development is assessed in four areas: Personal-Social, Fine-Motor Adaptive, Language, and Gross-Motor Skills through 125 age-graded tasks. Example: In a task assessing Fine Motor Skills, the examiner places a rattle on the table in front of a baby sitting in the parent's lap and encourages the child to pick it up. If the baby reaches for the rattle, s/he passes the "reach" task. Specialized training is required to administer and score the copyrighted Denver II. Order further information and materials from Denver Developmental Materials, Inc., P.O. Box 6919, Denver, CO 80206-0919, (303) 355-4729, (300) 419-4729. Cost: $70 for complete kit, including manual.
Test Interview Observa-tion	**Bayley Scales of Infant Development, Second Edition** (ages 1–42 months) Bayley, 1993	The Bayley Scales are designed to assess the current developmental functioning of infants and children aged 1 – 42 months. These widely used scales are individually administered and yield a developmental quotient measure. Included are Mental and Motor Scales and a 30 item Behavior Rating Scale. Specialized training is required to administer and score the copyrighted Bayley Scales. Administration time is from 25 – 60 minutes. Order further information and materials from The Psychological Corporation, 555 Academic Court, San Antonio, TX 78204-2498. Telephone (800) 211-8378. Website: www.psycorp.com. Cost: $798 for the complete kit including manual, test material, and 25 record forms.

*Included in appendix

Table 6-5: Comprehensive Measures of Growth and Development (continued)

Type	Measure	Description
Test Observa- tion	**Battelle Developmental Inventory** (Birth to 8 years) Newborg, et al 1984	The Battelle Developmental Inventory (BDI) is focused on identifying the developmental strengths and weaknesses of handicapped and non-handicapped children in infant, preschool, and primary programs. Five developmental areas are assessed: • Personal-Social, • Adaptive, • Motor, • Communication, and • Cognitive. An individually administered assessment, the copyrighted BDI takes approximately 60 minutes. A shortened version, The Battelle Developmental Inventory Screening Test, takes from 10-30 minutes. Order further information and materials from The Riverside Publishing Company, 8420 Bryn Mawr Ave, Chicago, IL 60631. Cost: $623 for a complete kit and test materials. Phone (800) 323-5663. Website www.riverpub.com.
Test Interview	**Early Screening Inventories Revised (ESI-R)** (**ESI-P**, ages 3-4 1/2; **ESI-K**, ages 4 1/2-6 years) Meisels et al., 1997	The ESI-R are individually administered brief developmental screenings for children 3 to 4 ½ (ESI-P) and 4 ½ - 6 years old (ESI-K). Three areas of development are assessed: Visual-Motor /Adaptive, Language and Cognition, and Gross Motor/Body Awareness. For example: The child is presented with an object, such as a ball, and asked to describe it. Total assessment requires 15-20 minutes. During a child's assessment, parents are encouraged to attend. A Parent Questionnaire asks about family history, health, and home behaviors as a supplement to the ESI-P or K assessment. The parent checks *yes, no*, or *don't know* to answer each question. For example: "Can your child use a spoon and fork to eat without spilling a lot?" and "Can your child be left alone with a babysitter without a big fuss?" The ESI-P and ESI-K require specialized training to administer. Both are available in English and Spanish and have normative data for culturally diverse populations. The ESI-P and ESI-K may be purchased by contacting Rebus Inc., P. O. Box 4479, Ann Arbor, MI 48106-4479, (313) 668-4870. Costs are $96 for complete kit, $75 for training package, and $19.50 per package of 30 score sheets.

Table 6-5: Comprehensive Measures of Growth and Development (continued)

Type	Measure	Description
Parent Checklist	**Ages and Stages Questionnaire (ASQ)** (ages 4 to 48 months) Squares, Potter, & Bricker, 1995.	The Ages and Stages Questionnaires (copyright 1995 by J. Squares, L. Potter and D. Bricker) assess developmental patterns of infants and young children. Nine questionnaires are completed by parents when the child is 4, 8, 12, 16, 20, 24, 30, 36, and 48 months of age; two optional questionnaires are completed when the child is 6 and 18 months of age. Items assess development in five areas: Communication, Gross Motor, Fine Motor, Problem Solving, and Personal-Social. The parent responds to the items as *yes*, *sometimes* or *not yet*. For example: "If you call to your baby when you are out of sight, does she look in the direction of your voice?" The ASQ can be mailed to the parents to monitor the development of their child in the home environment. The ASQ can also be completed in clinics, schools and child care settings by parents and/or service providers. The ASQ can be completed with ease by parents, but scoring and diagnostic assessment require professional training. The ASQ is available in English and Spanish and can be obtained from Paul H. Brookes Publishing Co., P. O. Box 10624, Baltimore, MD 21285-0624, 1-800-638-3775. Cost (manual, scoring, norms and ASQ parent survey masters) is $135.00. The ASQ is used in the Oregon Healthy Start Evaluation (OHSE).
Teacher Observation	**Oregon Assessment for 3-5 Year Olds in Developmentally Appropriate Classrooms** Saifer, 1997	This measure of child development was developed by Oregon Head Start education coordinators in 1989, directed and edited by Steffen Saifer. The instrument is focused on the behaviors and abilities that are believed to be the most important for healthy growth and development. There is an emphasis on self-concept, social skills, play behaviors, attitudes, and dispositions. Teachers use the assessment to set developmentally appropriate goals for each child, track children's progress, and conference with parents. There are 60 items in the full version of the instrument, and a short version is available with 35 items. Scores are based on frequencies and level of help required for specific behaviors on a 5-point scale. For example, "Verbally expresses feelings and needs during interactions with others" may be assessed as: 1 Does it rarely or not at all 2 Does it occasionally or with much help 3 Does it about half the time or with some help 4 Does it often or with little help 5 Does it almost always or with no help The instrument is copyrighted and published by the Early Childhood Training Center, School of Extended Studies, Portland State University, P.O. Box 1491, Portland, OR 97207. Orders may be telephoned to: 1-800-547-8887, ext. 4815. Assessment forms are available in Spanish and English. The user manual is $10 and assessment forms are $80 for 50 forms.

Table 6-5: Comprehensive Measures of Growth and Development (continued)

Type	Measure	Description
Teacher Checklist/ Records	**Kindergarten Teacher Survey on School Readiness*** Oregon Department of Education (ODE), 1997	Beginning in fall, 1997, the Oregon Department of Education began an annual survey of kindergarten teachers to assess the "school readiness" of children entering kindergarten. This 7-item checklist assesses readiness in six areas: • social; • emotional; • cognition; • language usage; • physical well-being; • motor development; and • approaches to learning. For example, for each child in their classrooms, teachers respond "yes" or "no" to descriptions such as "Physically healthy, rested, and well nourished" and, "Can sit still and not be disruptive of class." Local school districts may provide the results of this assessment, or the assessment may be adapted for use by programs. Results of this survey will be used by the Oregon Progress Board to track programs toward the Oregon Benchmark "Readiness for school at age 5."

* Included in appendix.

NOTE

Other Comprehensive Measures of Child Growth and Development

Although these copyrighted scales are not reviewed here, programs may find many to be valuable measures.

Revised BRIGANCE Diagnostic Inventory of Early Development	Birth to 7	Curriculum Associates, Inc. 5 Esquire Road North Billerica, MA 01862
Daberon-2: Screening for School Readiness	Ages 3 – 7 years	PRO-ED, Inc. 8700 Shoal Creek Blvd Austin, TX 78758-6897
Developmental Indicators for the Assessment of Learning-Revised (DIAL-R)	Ages 2 – 6 years	American Guidance Service 4201 Woodland Road P.O. Box 99 Circle Pines, MN 55014-1796
Infant-Toddler Developmental Assessment	Birth to 3 years	The Riverside Publishing Co. 8420 Bryn Mawr Ave Chicago, IL 60631
Kaufman Developmental Scale ***Kaufman Infant and Preschool Scale***	Birth to 9 years	Steolting Co. Oakwood Center 620 Wheat Lane Wood Dale, IL 60191
McCarthy Scales of Children's Abilities	2.5 to 8.5 years	Psychological Corporation 555 Academic Court San Antonio, TX 78204
Revised Developmental Screening Inventory (RDSI)	4 weeks to 36 months	Gesell Developmental Test Materials P.O. Box 272391 Houston, TX 77277-2391

Emergent Literacy Skills Measures

Emergent literacy refers to the development of children's literacy-related skills *prior* to the beginning of formal instruction. These emergent literacy skills are strongly associated with readiness for school at age five. Skills include:

- Oral language such as the ability to talk, offer explanations, or describe imaginary events;
- Awareness of the sounds that make up words (phonemic awareness);
- Print knowledge including experience with print and awareness of the alphabet; and
- Familiarity with writing instruments and letter forms.

A program outcome that is appropriate to many early childhood settings is age-appropriate or improved:

- **Emergent Literacy Skills (2.3.4)**

Table 6-6: Emergent Literacy Skills Measures

Type	Measure	Description
Observation	**Observer Rating Scales***	Observation is an effective way to measure children's emergent literacy skills. Based on program or curriculum goals, instruments can be developed that include clearly defined rating categories for observations of emergent literacy. Guidelines for developing Observation Rating Scales are found in Chapter 3 and in the appendix, under the title "Observation Rating Scales."
Test	**Cognitive Abilities Scale** (ages 2 – 3 years) Bradley-Johnson 1987	Individually administered, the Cognitive Abilities Scale (CAS) is useful for identifying deficits in cognitive and pre-academic skills among young children. The CAS consists of 88 items in 6 domains: language, imitation, reading, memory, mathematics, and handwriting and uses motivating toys to encourage child responses. The test is norm-based but is limited by its narrow age range. For further information and materials, contact PRO-ED, 8700 Shoal Creek Blvd, Austin, TX 78758. Telephone (800) 897-3202. Website www.proedinc.com. Cost is $139 for the complete kit, including examiner's manual, child's book, picture cards, toys, and 25 record books.
Test	**Preschool Language Scale – 3 (PLS-3)** (ages 1 – 7 years) Zimmerman, Steiner, & Pond 1979	Widely used, the PLS-3 provides a comprehensive assessment of receptive and expressive language skills. A variety of tasks measure sensory discrimination, logical thinking, grammar and vocabulary, memory and attention span, temporal and spatial relationships, and self image. The test is norm-based and has been administered in preschools, Head Start and other early childhood programs. For further information and materials, contact The Psychological Corporation, 555 Academic Court, San Antonio, TX 78204. Telephone (800) 211-8378. Website: www.psycorp.com. Cost: $126.50 for complete kit with 12 record forms. Extra record forms cost $25 for 12 or $83 for 50.

*Included in appendix

Table 6-6: Emergent Literacy Skills Measures (continued)

Type	Measure	Description
Test	**Peabody Picture Vocabulary Test, PPVT-3** (ages 2 ½ - 18 years) Dunn, Robertson, & Eisenberg, 1981)	The individually administered PPVT-R assesses a child or youth's receptive vocabulary by asking him/her to identify a picture that represents a word the examiner has spoken. Two alternate A and B forms are available, for pre- and post-test assessment. Administration takes 10-15 minutes per individual. National norms are available. To order the PPVT-R, contact the American Guidance Service, 4201 Woodlawn Road, Circle Pines, MN 55014. Telephone 1-800-328-2560. Email agsmail@agsnet.com. Cost: $219.95 for a complete kit with materials, manual, and record booklets.
Test	**School-Home Early Language and Literacy Battery – Kindergarten (SHELL-K)** (preschool – first grade) Snow, Tabors, Nicholson, & Kurland, 1994	The SHELL-K was developed to study early language and emergent literacy by Catherine Snow and her colleagues at Harvard University. Adapted for measuring the Oregon Benchmark on readiness for school by the Northwest Regional Educational Laboratory in 1994, the SHELL-K consists of a series of age-appropriate activities individually administered. Activities focus on environmental print, letter recognition, sounds in words, story and print concepts, vocabulary and definitions, and writing concepts. The Knowledge of Environmental Print activity uses five picture cards with simple words printed on them, and then the same words on cards with no pictures. The child is asked, "What is this?" Responses are scored according to how close an approximation the child is able to make to the correct answer. Examples: "ONE WAY" and, "GUM." The Story and Print Concepts activity is a "book game." The administrator combines reading an age-appropriate story with questioning the child during the story. Examples: "Where is the back of this book?" and, "What do you think this says?" Materials are available in English and Spanish. The Shell-K has been adapted by the Washington County Commission on Children and Families (1997) to assess emergent literacy skills among kindergarten children. For further information, contact Rebecca Severeide, Early Childhood Strategies, 2923 N.E. 22nd Avenue, Portland, OR 97212. Telephone: 503-282-7076, Email ecs@teleport.com.
Test	**Kaufman Survey of Early Academic and Language Skills (K-SEALS)** (ages 3 – 7 years) Kaufman & Kaufman, 1993	Part of the widely useful Kaufman scales, the Kaufman Survey of Early Academic and Language Skills (K-SEALS) is an individually administered assessment that focuses on children's language, preacademic skills, and articulation. Subscales focus on Early Academic Skills including number skills, letter and word skills. For further information, contact American Guidance Service, 4201 Woodland Road, P.O. Box 99, Circle Pines, MN 55014-1796. Telephone 1-800-328-2560. Email agsmail@agsnet.com.

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Table 6-6: Emergent Literacy Skills Measures (continued)

Type	Measure	Description
Test	**Language subscales of comprehensive measures**	Many of the comprehensive measures reviewed in Table 6-5 include subscales on language and literacy or language and cognition. These subscales can be useful indicators of emergent literacy skills.

*Included in appendix

Measures of Children's Social-Emotional Development

Children's emotional well-being is strongly related to their social skills and peer relationships. Prosocial interactions, positive affect, and successful problem-solving characterize positive peer relationships. Socially competent children tend to have a positive and agreeable behavioral style, knowledge of behavioral options and likely consequences; and the ability to "read" social cues and to engage in reciprocal exchanges.

Program outcomes associated with social-emotional development include age-appropriate or improved:

- **Social skills (2.5.1)**
- **Self-control (2.5.4)**
- **Conflict resolution, mediation, and anger management skills (2.5.3)**
- **Aggression &/or anti-social behavior (2.5.2)**
- **Peer interaction quality (2.5.5.)**

Measures of children's social-emotional development are reviewed next:

- Table 6-7: Measures of Social Skills and Relationships, and
- Table 6-8: Measures of Aggression or Other Problem Behaviors.

NOTE

Additional outcomes and measures related to social-emotional development, particularly among older children are found in Chapter 7: Youth Outcomes.

Also see the social-emotional development subscales of the comprehensive assessments reviewed in Table 6-5.

Table 6-7: Children's Social-Emotional Development Outcome Measures

Type	Measure	Description
Observation	**Observation Rating Scales***	Observation is an effective way to measure children's social emotional development. See Chapter 3 for a discussion of observation methodology. Guidelines for developing rating scales for your observations are in the appendix, under the title "Observation Rating Scales."
Observation	**Social Development Checklist*** Severeide, 1995	Parents and/or teachers report their observations of a child's social skills on this 15-item questionnaire. Adults note the frequency with which the child behaves in a specific manner, and their estimation of the importance of that behavior. Examples: "Usually is in a good mood" and, "Stays on topic during conversations." Available in both English and Spanish, this questionnaire was developed for children aged 5-7 years but could easily be adapted for younger children.
Teacher Checklist	**Social Attributes Checklist*** (ages 3-8) McClellan & Katz, 1994	This is a 24-item checklist of positive social attributes that a child may display in an early childhood classroom or care setting. Three domains are assessed: • Individual Attributes (8 items), • Social Skill Attributes (14 items), and • Peer Relationship Attributes (2 items). The teacher checks off the attribute if it is a *typical* characteristic for the child being assessed. Examples: "Shows the capacity to empathize" and, "Sometimes invited by other children to join them in play, friendship, and work."
Child/Youth Survey	**Social Acceptance subscale of the Self-Perception Profile (SPPA; SPPC)** Harter, 1985	This 6-item subscale measures the degree to which the child or adolescent believes he/she is accepted by peers or feels popular. This scale does not directly measure social skills. Each item is a statement that combines a structured alternative format. Example: "Some kids find it hard to make friends BUT other kids find it's pretty easy to make friends." Responses indicate which side of the statement is most "like me" and if the statement is "sort of true" or "really true." (see Table 7-8 for further description of the SPPA/SPPC). The Self-Perception Profiles are copyrighted and can be ordered from Dr. Susan Harter, University of Denver, Department of Psychology, 2155 South Race Street, Denver, CO 80208-0204, (303)-871-2478. Cost: $15.00 for instruction manual, questionnaires, and scoring key.

*Included in appendix

Table 6-7: Children's Social-Emotional Development Outcome Measures (continued)

Type	Measure	Description
Teacher Observational Student Assessment	**Walker-McConnell Scale of Social Competence and School Adjustment** (ages K – sixth grade and seventh – twelfth grade) Walker & McConnell, 1988	There are two instruments included in the Walker-McConnell. The first is for elementary students. This 43-item positively worded instrument assesses positive teacher and peer related forms of school adjustment. The second instrument is for seventh through twelfth-grade students. It is a 53-item positively-worded measure of student classroom behaviors and social skills in four domains: Peer Relations, Empathy, Self-Control, and School Adjustment. Respondents indicate on a 5-point scale the frequency with which each child shows the behavior. Examples: *Self-Control* "Can accept not getting own way." *Peer Relations* "Invites peers to interact." *School Adjustment* "Has good work habits." *Empathy* "Shows sympathy." The empathy subscale of the adolescent measure discriminates between anti-social and at-risk youth. The reliability and validity of both instruments have been tested extensively and are excellent. National norms are available. The Walker-McConnell instruments are copyrighted, and may be ordered from Singular Publishing Group, 401 West A Street, San Diego, CA 92101. Telephone: 1-619-238-6777. Email: singpub@mail.cerfnet.com. For each age group, a package containing a user manual, a technical manual, and 20 forms costs $54.95. An additional 20 forms cost $19.95.
Parent/ Teacher/ Child Survey	**Social Skills Rating System** Gresham & Elliot, 1990	Social skills are measured for preschool, elementary, and secondary school levels by this comprehensive rating system. Teacher and Parent Forms are available for all three levels. The elementary and secondary levels also include a student form. The Teacher Form focuses on social skills (30 items), behavior problems (18 items), and academic performance and motivation (9 items). The Parent Form focuses on social skills (38 items) and behavior problems (17 items). In both forms, the respondent indicates on a 3-point scale the frequency with which the child engages in specific social skills and behavior problems. In the Teachers Form subscale on academic performance, teachers rate each child in comparison with other children in the classroom on specific academic areas, motivation, and behavior. To obtain the measure, contact American Guidance Service, 4201 Woodlawn Road, Circle Pines, MN 55014. Telephone 1-800-328-2560. Email agsmail@agsnet.com. Cost: $124.95 for the preschool/elementary level starter set. Analysis software is available.

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Table 6-7: Children's Social-Emotional Development Outcome Measures (continued)

Type	Measure	Description
Parent/ Teacher Survey	**Behavioral and Emotional Rating Scale, BERS** (ages 5-18 years) Epstein & Sharma, 1997	The 52-item Behavioral and Emotional Rating Scale (BERS) is an adult assessment of five aspects of a child's personal strengths. The BERS can be used for children ages five to 18, with and without emotional and behavioral disorders. The strengths assessed are: • Interpersonal Strength, • Family Involvement, • Intrapersonal Strength, • School Functioning, and • Affective Strength. The BERS is completed by a teacher, parent, or other person knowledgeable about the child; completion takes approximately 10 minutes. Each BERS item describes a statement children may demonstrate, such as "reacts to disappointments in a calm manner" and "completes school tasks on time." The respondent uses a 4-point scale to rate the child, with 0 = *not at all like the child* to 3 = *very much like the child*. Item scores are summed to determine subtest and total scores. Scores can be converted to percentile ranks and standardized into the BERS Strength Quotient. The BERS may be used to identify children who may have limited emotional and behavioral strengths, to set goals for intervention, and to identify progress in particular areas of strength. Test-retest reliability and inter-rater reliability coefficients exceed .80; internal consistency coefficients exceed .85 for each subtest and .90 for the overall score. Content, construct, and criterion-related validity tests have also been positive. The measure compares well with the Self-Perception Profile for Children, and the Walker McConnell Scale of Social Competence and School Adjustment. The BERS is copyrighted, and may be purchased for $74.00 from PRO-ED, 8700 Shoal Reek Blvd., Austin, TX 78757. Telephone (800) 897-3202. Website www.proedinc.com. The package includes a 90-page manual describing administration, scoring and interpretation of the scale, and 50 scales.

*Included in appendix

Table 6-8: Children's Aggression or Anti-Social Behaviors Outcome Measures

Type	Measure	Description
Records	**Records/ Logs/ of Pro-social or Anti-social Behavior**	Early childhood settings may keep a daily log or records for each child of specific prosocial and anti-social behaviors observed. Elementary school settings often have records of referrals for anti-social behaviors.
School Records	**School Archival Records Search (SARS)** Walker, Block-Pedego, Todis, & Severson, 1991	This form was developed to provide a standardized form for retrieving school records information. It facilitates obtaining records about children's age, ethnicity, attendance, academic progress, retentions, referrals, and disciplinary contacts and actions taken. It takes from 15-30 minutes to complete for each child. It may be obtained from Sopris West, Inc.,4093 Specialty Place, Longmont, CO 80504. Telephone 303-651-2829. The SARS Kit costs $35, extra forms $15. Also see the sample Records Extraction Form* in the appendix.
Parent Survey	**Eyberg Child Behavior Inventory*** Eyberg & Ross, 1978; Burns et al., 1991	This is a 36-item questionnaire for parents of young children to assess both the frequency their child engages in specific problem behaviors and whether they consider any of those behaviors as a current problem for their child. Examples: "Dawdles in getting dressed" and, "Acts defiant when told to do something."
Parent/ Teacher/ Child Observa-tion or Rating	**Child Behavior Checklist** (CBCL, ages 2-18) Achenbach & Edelbrock, 1983; Achenbach, 1997	The CBCL is a 123-item scale which examines behavioral and emotional problems ins children and youth. The CBCL is designed as a questionnaire, but can be administered by an interviewer. Parents, teachers, or children over age 11 rate behavior "now or within the past 6 months," as "not true" (0), "sometimes true" (1), and "often true" (2). Higher scores indicate a higher level of behavior problems. Examples of items include: 0 1 2 Destroys his/her own things 0 1 2 Feels he/she has to be perfect Despite its length, the CBCL is easy to complete; it is a highly reliable and well-validated measure. The Child Behavior Checklist (CBCL) is available in a variety of formats. Forms completed by the parent include a profile for children ages 2-3, and a profile for children ages 4-18. Also available is the self-administered profile for children ages 11-18, the teacher report for children ages 5-18, and the direct observation form for children ages 5-14. In the latter, children are rated during 10-minute observations in the classroom and during group activities. Each form has Internalizing, Externalizing, and total behavior problem scales. Normative data are available on all forms of the CBCL. Fees for the checklist are $10.00 for 25 forms, and $25.00 for the manual. There are also IBM and Apple versions of the checklist. Send orders to Child Behavior Checklist, University Associates in Psychiatry, 1 South Prospect St., Burlington, VT 05401-3456. Telephone (802)-656-8313 or (802)-656-4563.

*Included in appendix

Section 3: Child Environments

Children deserve to be raised in environments that are safe and supportive of healthy, positive development. In addition to their homes, children's environments include:

- Communities and neighborhoods;
- Child care and schools, as well as other caregiving environments; and
- Electronic entertainment (television, video and computer games, and films) and other recreational settings.

In this section, measures of these environments are reviewed in:

- Table 6-9: Environmental Health and Safety Measures
- Table 6-10: Television Viewing Measures

> ***NOTE***
>
> *Other measures of children's environments are reviewed in later chapters. Specifically,*
>
> *Chapter 7:Table 7-2: Community Environments*
> *Chapter 8: Educational Outcomes, and*
> *Chapter 9: Child Care and Youth Environments.*

Environmental Health and Safety Outcome Measures

Healthful environments for children are those in which chemical and biological hazards, such as lead and asbestos (in paint, air, water), respiratory irritants (smoke, airborne particulates, smog), and disease organisms, are minimized as much as possible.

Safe environments minimize the risk to children from accidents and violence. Accidents vary in frequency by the age of the child. Most often children are affected by:

- Auto accidents;
- Accidents in the home, such as fires, falls, scalding, choking, poisoning, or drowning; and
- Accidental shootings and suicides.

Safety practices help to prevent accidents in homes, childcare centers, automobiles, and in recreational and other childhood settings. For example, safe environments include "child-proofed" and peaceful homes and schools that are free from high accident rates and violence. Safe, healthy neighborhoods and communities have low levels of crime and violence, and higher levels of positive opportunities and adult supervision.

Program outcomes that address environmental health and safety include adequate or improved:

- **Healthful environments (2.2.8)**
- **Safe environments (2.4.1)**
- **Safety practices (2.4.2)**

Table 6-9: Environment Health and Safety Outcome Measures

Type	Measure	Description
Records	**Reported Accidents, Poisonings, Violence, or Safety Hazards**	Records from emergency rooms, police departments, physicians, health department, schools and preschools regarding accidents, lead poisoning, other poisonings, shootings, and/or violence.
Parent Question-naire	**Your Child's Health and Safety - Adapted*** National Transition Demonstration Consortium, 1992	This measure includes the Safety Practices Questionnaire (12 items). Two checklists measure family safety practices and safety characteristics of the home environment. For a fuller description, see Table 6-4.
Observation Rating	**Safety Practices in Child Care Settings, Preschools, Schools, and Community Centers**	Several measures of child care and other group environments include subscales or indicators regarding health and safety. See for example: • Infant/Toddler Environment Rating Scale (ITERS) • Early Childhood Environment Rating Scale (ECERS) • Family Day Care Rating Scale (FDCRS) • School-Age Care Environment Rating Scale (SACERS) The ITERS, ECERS, FDCRS, SACERS are described in Chapter 9, Tables 9-1 and 9-2.
Parent Survey	**Neighborhood Environment for Children Rating Scales*** Korbin, et. al., 1995	The neighborhood environment for children rating scale measures perceptions of neighborhood quality. Special attention is given to characteristics associated with maltreatment or delinquency and to the willingness of adults in the neighborhood to intervene with children. The seven relevant subscales all have reliabilities that exceed .70. These subscales are: • Neighborhood quality, eleven items • Disorder, fourteen items • Victimization, fourteen items • Retaliate, seven items • Stop delinquency, six items • Stop misbehavior, four items • Assist, five items Ten-point response categories vary by scale. Example: "children in this neighborhood might yell or swear at someone who verbally corrects their behavior." *Also see Chapter 7, Youth Outcomes, Table 7-2 for other indicators of community environments.*

*Included in appendix

Table 6-9: Environment Health and Safety Outcome Measures (continued)

Type	Measure	Description
Rating scale for observations/ interviews	**Family Assessment Form (FAF): Living Conditions Subscale** Children's Bureau of Southern California, 1997	The FAF is a comprehensive family assessment system that was originally designed for child welfare agencies but can be adapted for use in a wide variety of settings for service planning, case documentation, and evaluation; it is particularly useful for home-based services. The FAF can also be used to quantify existing records by translating observations into a numerical rating. One area examined is living conditions (adequacy, safety, cleanliness). For further information on the FAF, see Chapter 5, Family Outcomes, Table 5-1.

* Included in appendix

Measures of Television Viewing Outcomes

Limited television viewing refers to the amount of time children spend viewing television, as well as the content of what is viewed. TV viewing with interactive adults means viewing with caring adults who *discuss* the content with children in ways that enhance learning. In addition to television viewing, children's use of other electronic media (such as videogames) should also be monitored. Related program outcomes may include:

- **Limited television viewing (2.4.3)**
- **TV viewing with interactive adults (2.4.4)**

Table 6-10: Television Viewing Outcome Measures

Type	Measure	Description
Parent Survey	**Family Television Practices Survey*** Oregon State University, Family Policy Program, 1998	This 12–item parent survey asks parents to describe their youngest school aged child's behavior in relationship to television, videos, and videogames. Items include average number of school day and weekends hours spent viewing television/videos and playing videogames/computer games. Other items assess rules about use and adult-child interactions. For example, items about television or videogames rules assess the nature of these rules and who sets the rules (if any). This measure could be adapted for older children and youth to complete as a self-report.

* Included in appendix

Measures of Learning Environments and Participation

Learning environments are developmentally appropriate when they are both age-appropriate *and* appropriate for the specific individuals who inhabit them. This means that activities and interactions are adjusted to fit individual temperaments, strengths and needs. Quality in childcare, early childhood programs, and other early learning environments involves:

- developmentally appropriate practices;
- high levels of positive adult-child interaction;
- activities which emphasize social skills including cooperation, sharing, and helping;
- freedom to explore, play, and create.

Program outcomes related to learning environments may include adequate or improved:

- **Age-Appropriate Learning Environments (2.4.5)**
- **Participation in Quality Child Care and Early Childhood Programs (2.4.6)**

See Tables 9-1 and 9-2 in Chapter 9: Child Care and Youth Environments for measures of these outcomes.