

## Developmental, Mental Health/Behavioral and Academic Screens

The following chart is a list of tools or tests that meet standards for screening test accuracy, meaning that they correctly identify at least 70% of children with disabilities while also correctly identifying at least 70% children without disabilities. All included tools/ tests were standardized on national samples and validated against a range of measures. Not included are tools/tests such as the Denver-II that fail to meet standards (limited standardization, absent validation, and no proof of accuracy) or tools/tests of single developmental domains (e.g., just language or motor). The first column provides publication information and the cost of purchasing a specimen set. The "Description" column provides information on alternative ways (if available) to administer measures (e.g., waiting rooms). The "Accuracy" column shows the percentage of patients with and without problems identified correctly. The "Time Frame/Costs" column shows the costs of materials per visit along with the costs of professional time (using the average MD salary) needed to administer each measure. For parent report tools, administration time reflects not only scoring of test results, but also the relationship between each test's reading level and the percentage of parents with less than a high school education (who may or may not be able to complete tests in waiting rooms due to literacy problems and will thus need interview administrations).

DEVELOPMENTAL SCREENS RELYING ON INFORMATION FROM PARENTS	Age range	Description	Scoring	Accuracy	Time Frame/Costs
<p><b>Child Development Inventories (formerly Minnesota Child Development Inventories)</b> (1992) Behavior Science Systems, Box 580274, Minneapolis, MN 55458 (phone: 612-929-6220) (\$41.00)</p>	3 - 72 months	<p>three separate instruments each with 60 yes-no descriptions. Can be mailed to families, completed in waiting rooms, administered by interview or by direct elicitation. A 300 item assessment level version may be useful in follow-up studies or subspecialty clinics and produces age equivalent and cutoff scores in each domain. Also in Spanish</p>	a single cutoff tied to 1.5 standard deviations below the mean	sensitivity in detecting children with difficulties is excellent (greater than 75% across studies) and specificity in correctly detecting normally developing children is good (70% across studies).	<p>about 10 minutes (if interview needed) Materials ~\$.40 Admin. ~\$3.40 Total = ~\$3.80</p>
<p><b>Parents' Evaluations of Developmental Status (PEDS).</b> (1997) Ellsworth &amp; Vandermeer Press, Ltd. P.O. Box 68164 Nashville, Tennessee 37206 Phone: 615-226-4460; fax: 615-227-0411 <a href="http://www.pedstest.com">http://www.pedstest.com</a> (\$30.00)</p>	Ages birth to 9 years	<p>10 questions eliciting parents' concerns in English, Spanish and Vietnamese. Written at the 5th grade level. Determines when to refer, provide a second screen, provide patient education, or monitor development, behavior, and academic progress.</p>	identifies children as low, moderate or high risk for various kinds of disabilities and delays	sensitivity ranging from 74% to 79% and specificity ranging from 70% to 80% across age levels.	<p>about 2 minutes (if interview needed) Materials ~\$.31 Admin. ~\$.88 Total = ~\$1.19</p>
<p><b>Ages and Stages Questionnaire</b> (formerly Infant Monitoring System) (1994). Paul H. Brookes, Publishers, PO Box 10624, Baltimore, Maryland 21285 (1-800-638-3775). (\$130) <a href="http://www.pbrookes.com/">http://www.pbrookes.com/</a></p>	4 to 60 months	<p>Clear drawings and simple directions help parents indicate children's skills.. Separate copyable forms of 25 - 35 items for each age range (tied to well-child visit schedule). Can be used in mass mail-outs for child-find programs. In English, Spanish, French</p>	Single pass/fail score	sensitivity ranged 70% to 90% at all ages except the 4 month level. Specificity ranged from 76% to 91%	<p>about 15 minutes (if interview needed) Materials ~\$.40 Admin. ~\$4.20 Total = ~\$4.60</p>

**BEHAVIORAL/EMOTIONAL SCREENS RELYING ON INFORMATION FROM PARENTS**

<p><b>Eyberg Child Behavior Inventory/Sutter-Eyberg Student Behavior Inventory.</b> Psychological Assessment Resources, P.O. Box 998 Odessa Florida: 33556 (1-800-331-8378) (\$109.00) <a href="http://www.parinc.com/">http://www.parinc.com/</a></p>	<p>2 to 16 years of age</p>	<p>The ECBI/SESBI consists of 36 –38 short statements of common behavior problems. More than 16 suggests the referrals for behavioral interventions. Fewer than 16 enables the measure to function as a problems list for planning in-office counseling and selecting handouts. The tools are helpful in monitoring behavioral progress</p>	<p>single refer/nonrefer score for externalizing problems, -- conduct, attention, aggression, etc.</p>	<p>sensitivity 80%, specificity 86% to disruptive behavior problems</p>	<p>about 7 minutes (if interview needed) Materials ~\$.30 Admin. ~\$2.38 Total = ~\$2.68</p>
<p><b>Pediatric Symptom Checklist.</b> Jellinek MS, Murphy JM, Robinson J, et al. Pediatric Symptom Checklist: Screening school age children for academic and psychosocial dysfunction. <u>Journal of Pediatrics</u>, 1988;112:201-209 (the test is included in the article). Also can be freely downloaded at <a href="http://www.dbpedts.org/handouts">http://www.dbpedts.org/handouts</a></p>	<p>4 - 16 years.</p>	<p>35 short statements of problem behaviors including both externalizing (conduct) and internalizing (depression, anxiety, adjustment, etc.) Ratings of never, sometimes or often are assigned a value of 0,1,or 2. Scores totaling 28 or more suggest referrals. Factor scores identify attentional, internalizing and externalizing problems.</p>	<p>single refer/nonrefer score</p>	<p>All but one study showed high sensitivity (80% to 95%) but somewhat scattered specificity (68% - 100%).</p>	<p>about 7 minutes (if interview needed) Materials ~\$.10 Admin. ~\$2.38 Total = ~\$2.48</p>
<p><b>Parents' Evaluations of Developmental Status (PEDS).</b> (1997) Ellsworth &amp; Vandermeer Press, Ltd. P.O. Box 68164 Nashville, Tennessee 37206 Phone: 615-226-4460; fax: 615-227-0411 <a href="http://www.pedstest.com">http://www.pedstest.com</a> (\$30.00)</p>	<p>Ages birth to 9 years</p>	<p>10 questions eliciting parents' concerns in English, Spanish and Vietnamese. Written at the 5th grade level. Determines when to refer, provide a second screen, provide patient education, or monitor development, behavior, and academic progress.</p>	<p>identifies children as low, moderate or high risk for various kinds of disabilities and delays</p>	<p>sensitivity ranging from 74% to 79% and specificity ranging from 70% to 80% across age levels.</p>	<p>about 2 minutes (if interview needed) Materials ~\$.31 Admin. ~\$.88 Total = ~\$1.19</p>
<p><b>Ages &amp; Stages Questionnaires: Social-Emotional (ASQ:SE)</b> Paul H. Brookes, Publishers, PO Box 10624, Baltimore, Maryland 21285 (1-800-638-3775). (\$125) <a href="http://www.pbrookes.com/">http://www.pbrookes.com/</a></p>	<p>6 – 60 months</p>	<p>Designed to supplement the ASQ, the ASQ SE consists of 30 item forms for each of 8 visits between 6 and 60 months. Items focus on self-regulation, compliance, communication, adaptive functioning, autonomy, affect, and interaction with people</p>	<p>Single cutoff score indicating when a referral is needed</p>	<p>Sensitivity ranged from 71% - 85%. Specificity from 90% to 98%</p>	<p>10 – 15 minutes if interview needed. Materials ~ \$.40 Admin. ~\$4.20 Total = ~ \$4.40</p>

<p><b>FAMILY SCREENS</b>  <b>Family Psychosocial Screening.</b>  Kemper, KJ &amp; Kelleher KJ. Family psychosocial screening: instruments and techniques. <u>Ambulatory Child Health</u>. 1996;4:325-339. (the measures are included in the article) and downloadable at <a href="http://www.pedstest.com">http://www.pedstest.com</a> or</p>	<p>Screens parents and best used along with the above screens</p>	<p>A two-page clinic intake form that identifies psychosocial risk factors associated with developmental problems including: a four item measure of parental history of physical abuse as a child; (2) a six item measure of parental substance abuse; and (3) a three item measure of maternal depression.</p>	<p>Refer/nonrefer scores for each risk factor. Also has guides to referring and resource lists.</p>	<p>All studies showed sensitivity and specificity to larger inventories greater than 90%</p>	<p>about 15 minutes (if interview needed)  Materials ~\$4.20  Admin. ~\$4.20  Total = ~\$4.40</p>
<p><b>DEVELOPMENTAL SCREENS RELYING ON ELICITING SKILLS DIRECTLY FROM CHILDREN</b></p>					
<p><b>Brigrance Screens.</b> Curriculum Associates, Inc. (1985) 153 Rangeway Road, N. Billerica, MA, 01862 (1-800-225-0248 (\$248.55).  <a href="http://www.curriculumassociates.com/">http://www.curriculumassociates.com/</a></p>	<p>0 - 90 months</p>	<p>nine separate forms, one for each 12 month age range. Taps speech-language, motor, readiness and general knowledge at younger ages and also reading and math at older ages. Uses direct elicitation and observation. In the 0 – 2 year age range, can be administered by parent report</p>	<p>cutoff and age equivalent scores for motor, language, and readiness and an overall cutoff</p>	<p>sensitivity and specificity to giftedness and to developmental and academic problems are 70% to 82% across ages</p>	<p>10 – 15 minutes  Materials ~\$53  Admin. ~\$10.15  Total = ~\$10.68</p>
<p><b>Battelle Developmental Inventory Screening Test (BDIST)</b> (1984). Riverside Publishing Company, 8420 Bryn Mawr Avenue, Chicago, Illinois 60631 (1-800-767-8378) (\$99.00+\$270 if materials kit is purchased but test stimuli can be obtained for about \$50 by shopping at discount department stores).  <a href="http://www.riverpub.com/">http://www.riverpub.com/</a></p>	<p>12 - 96 months</p>	<p>items use a combination of direct assessment, observation, and parental interview. The receptive language subtest may serve as a brief prescreen. Difficult to administer and takes 15 minutes for younger children and 35 for older ones. Well standardized and validated.</p>	<p>age equivalents (somewhat deflated), cutoffs at 1.0, 1.5, and 2.0 standard deviations below the mean</p>	<p>sensitivity and specificity are 70% to 80% across ages</p>	<p>15 – 35 minutes  Materials ~\$40  Admin. ~\$20.15  Total = ~\$20.55</p>
<p><b>Bayley Infant Neurodevelopmental Screen (BINS).</b> San Antonio, Texas: The Psychological Corporation, 1995. 555 Academic Court, San Antonio, TX 78204 (1-800-228-0752) ( \$195)  <a href="http://www.psychcorp.com">http://www.psychcorp.com</a></p>	<p>3 - 24 months</p>	<p>uses 10 - 13 directly elicited items per 3 - 6 month age range assess neurological processes (reflexes, and tone); neurodevelopmental skills (movement, and symmetry) and developmental accomplishments (object permanence, imitation, and language)..</p>	<p>categorizes performance into low, moderate or high risk via cut scores. Provides subtest cut scores for each domain</p>	<p>specificity and sensitivity are 75% to 86% across ages</p>	<p>10 - 15 minutes  Materials ~\$30  Admin. ~\$10.15  Total = ~\$10.45</p>

<p><b>ACADEMIC SCREENS</b>  <b>Pediatric Symptom Checklist.</b> Jellinek MS, Murphy JM, Robinson J, et al. Pediatric Symptom Checklist: Screening school age children for academic and psychosocial dysfunction. <i>Journal of Pediatrics</i>, 1988;112:201-209 (the test is included in the article). Also can be freely downloaded at <a href="http://www.dbpeds.org/handouts">http://www.dbpeds.org/handouts</a></p>	<p>4 - 16 years.</p>	<p>35 short statements of problem behaviors including both externalizing (conduct) and internalizing (depression, anxiety, adjustment, etc.) Ratings of never, sometimes or often are assigned a value of 0,1, or 2. Scores totaling 28 or more suggest referrals. Factor scores identify attentional, internalizing and externalizing problems. Single item on school difficulties predictive of academic dysfunction.</p>	<p>single refer/nonrefer score, error analysis needed to identify school dysfunction</p>	<p>All but one study showed high sensitivity (80% to 95%) but somewhat scattered specificity (68% - 100%).</p>	<p>about 7 minutes (if interview needed)  Materials ~\$.10  Admin. ~\$2.38  Total = ~\$2.48</p>
<p><b>Comprehensive Inventory of Basic Skills-Revised Screener (CIBS-R Screener)</b> Curriculum Associates, Inc. (1985) 153 Rangeway Road, N. Billerica, MA, 01862 (1-800-225-0248 (\$38.95). <a href="http://www.curriculumassociates.com/">http://www.curriculumassociates.com/</a></p>	<p>1 - 6<sup>th</sup> grade</p>	<p>Administration involves one or more of three subtests (reading comprehension, math computation, and sentence writing). Timing performance also enables an assessment of information processing skills, especially rate.</p>	<p>Computerized scoring produces percentiles, quotients, cutoffs</p>	<p>70% to 80% accuracy across all grades</p>	<p>Takes 10 - 15 minutes  Materials ~\$.53  Admin. ~\$10.15  Total = ~\$10.68</p>

*\*updated from Glascoe FP. Collaborating with Parents. Nashville, Tennessee: Ellsworth & Vandermeer Press, Ltd, 1998*