

**Early Identification of Autism Spectrum Disorders & other Developmental-Behavioral Problems:
What's a busy practice to do?
POST-TELECONFERENCE HANDOUTS (9-22-09)**

Talking Points on Developmental-Behavioral Screening

Current Detection Rates

- Early intervention is effective and saves society \$17 for each \$1 spent
- 70% - 80% of children with disabilities are not detected in primary care
- Only 2% - 4% of children between 0 – 5 are served in early intervention. The Centers for Disease Control holds the prevalence to be 8%: twice that for school age children.
- Providers should be referring 1 out of 6 patients!
- Informal detection methods are the cause of under-detection (e.g., checklists, informal questions to parents, key items on the Denver, observation, etc.)
- The American Academy of Pediatrics and Medicaid EPSDT recommend validated screening at each well visit

Time and Expense

- Informal detection methods take time
- The Denver-II, a measure which over-detects and under-refers, takes 20 – 25 minutes and costs \$40 or more in professional time
- Quality screens using information from parents take less time, cost between \$1.50 and \$19 in professional time. Office organization, commitment, and patient education materials are essential when using these tools.

Reimbursement

- The Center for Medicaid and Medicare guaranteed reimbursement for the 96110 (broad-band screens) and 96111 procedure code (narrow-band screens and assessments) *unbundled* from the well visit via –25 modifier on the preventative services code. The average reimbursement rate is about \$13.00 nationally.
- Only standardized and validated screens qualify for reimbursement. The Denver-II is not a validated screen.
- CPT codes may be needed (a list is below)
- States are required to implement the CMS policy by December 2004
- Private payors generally follow Medicaid policy and most now reimburse for 96110
- Clinic coordinators should check billing/coding procedures per payer. Denied claims should be appealed
- The AAP has an office on billing and coding (Lwalsh@aap.org) and encourages providers to alert them if appeals are denied

Better Alternatives

- There are validated and standardized parent report screens that parents can generally complete on their own thus saving substantial professional time
- A table of accurate measures feasible for primary care is below including screens for older children. Information on all can be found at the AAP's website on screening: www.dbpeds.org
- A second-stage screen, the Modified Checklist of Autism in Toddlers is recommended by the American Academy of Neurology and can be downloaded at [www2.gsu.edu/~psydlr/Diana L. Robins, Ph.D..html](http://www2.gsu.edu/~psydlr/Diana_L._Robins,_Ph.D..html) or completed online at www.pedstest.com
- Several screens for older children can also be downloaded at www.pedstest.com

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Services

- There are numerous free but high quality services for helping children and families:
- To find services for children 3 and older, see www.nectac.org or call the public schools department of special education
- For more information on autism and other disabilities, wall charts on critical milestones, information handouts for families, implementation assistance, etc. See www.firstsigns.org and www.dbpeds.org

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Organizing Offices for Detecting and Addressing Developmental and Behavioral Problems

Frances Page Glascoe, Adjunct Professor of Pediatrics, Vanderbilt University
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1. Ask parents to complete parent-report instruments while in waiting or exam rooms.
2. To avoid incomplete, incorrect, or nonreturned parent report screens, ask parents if they would like to complete the measure or on their own or have someone go through it with them. Almost all poor readers will select the latter.
3. Mail parent-report tests in advance of well visits so that physicians need only score and interpret during the visit. This often improves the quality of parent report because families may have sufficient time to respond thoughtfully. Advance mailings are also helpful with families whose English is limited because they can usually find someone in the community to help translate items.
4. Set up a return visit devoted to screening when developmental concerns are raised unexpectedly toward the end of an encounter. A similar alternative is to have office staff call families after an incomplete encounter and administer a screen over the telephone.
5. Train office staff to administer, score, and even interpret screening tests so that professional staff need only explain results to families and identify needed resources.
6. Pool a portion of practice profits to fund a developmental specialist or a nurse practitioner. Such a person can administer screening tests (and perhaps provide parent counseling, run parent training groups, assist with group well-child visits, offer diagnostic evaluations and referrals)
7. Recruit education majors or train volunteers to administer screening tests on a periodic basis (e.g., set a regular screening day in your office)
8. Maintain a current list of telephone numbers for local service providers (e.g., speech-language centers, school psychologists, mental health centers, private psychologists and psychiatrists, parent training classes, etc.) The availability of brochures describing services may promote parental follow-through on referral suggestions. Giving families phone numbers when you make referrals, eliminates this as a barrier to seeking services. We keep a list of our most common referral resources glued to the wall of each exam room.
9. Encourage professionals involved in hospital-based care (e.g., child-life workers) to screen patients and refer to them when appropriate
10. Collaborate with local service providers (e.g., day care centers, Head Starts, public health clinics, department of human services workers, etc.). to establish community-wide child-find programs that use valid, accurate screening instruments.
12. Keep parent information sheets handy. My clinic keeps them in plastic binders (so that originals are not lost). When an issue arises, I retrieve the original handout, copy it, read it on the way back to the exam room (in order to refresh myself on the contents) and then go through the highlights with parents.
13. When using information handouts, go through them briefly with families and highlight the significant parts. Use of a highlighter pen (along with your oral description) should help parents (especially those with limited literacy) recall the more critical information.
14. Use screens as designed, adhering to standard wording, scoring, and decision-making. Violating test standardization decreases validity and increases the chance of underdetection.
15. Experienced physicians and nurses often memorize test items and internalize norms. This may lead them to rely heavily on clinical judgment. Since human reasoning is not infallible and judgment can drift over time, professionals should test their decisions at least periodically by comparing them to the results of standardized screening tests. This should help keep clinical skills honed and provide an appropriate model for less experienced professionals such as residents and medical students.

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Interpreting Screening Tests to Families and Encouraging Follow Through

1. Prepare parents for screening in a positive way. When making phone calls or sending reminder letters about upcoming well-visit appointments, explain in an encouraging manner that the visit represents an opportunity to view how children are coming along developmentally and behaviorally and to provide parents suggestions about addressing any difficulties children are experiencing. This should help families keep these critical appointments and better prepare them for screening.
2. For parents with expressed concerns for which additional screening or referral is the best response, prepare them by affirming the value of their worries and their careful observations of their child (e.g., *your concerns are important and we need to look further at how your child is doing. This will help us decide whether additional help is needed.*)
3. Inform parents about the purpose for each test prior to administering screening tools. This should help ensure that parents understand what is happening and better prepare them for the results.
4. Use euphemisms rather than diagnostic labels when interpreting screening tests. Phrases like *"may be delayed"*, *"may be behind other kids"*, *"seems to be learning more slowly"*, *"could be having difficulty learning"* are all terms which do not connote a child in a wheelchair or one with multiple genetic anomalies. They are effective terms but not devastating ones. They seem to encourage families to seek additional evaluations without causing paralytic fear.
5. Provide telephone numbers and descriptions of services. It is likely that families who have the necessary information to follow through are better able to do so. Descriptions of programs may enable families to visualize themselves participating and increase the chance they actually will.
6. Write non-medical recommendations on a prescription pad or on letterhead. This is a powerful tool for affirming the importance of a recommendation and encourages families to treat this as seriously as other medical interventions.
7. Offer ongoing support. Parents will often be faced with family members who have minimal investment in your recommendations for further evaluations and services. This may be because they were not present during the original encounter and only hear the recommendation second-hand. It may also be a result of observing the problem but rationalizing its meaning, (e.g., *"his dad was just like that as a boy and he's doing fine now"...* *"It's just a phase, she'll grow out of it"*). One way to approach this is to help the parent who accompanied the child anticipate and deal with resistance. Acknowledge their fears and the likelihood that they will have a bout of wishful thinking (e.g., observing their child very carefully for signs that contradict delays). It is also helpful to invite parents to return with dissenting family members in tow so that you can re-explain your findings. Finally, you might let parents know that if they get "cold feet" and decide not to go that you want to be informed, (e.g., *"It's just as if I prescribed medicine and you decided not to give it to him, I'd want you to talk with me about it. Treat this prescription/recommendation in the same way. Don't be afraid to talk with me if you have reservations about following through."*)
8. Consider referrals to parent support groups or give parents the names and phone numbers of parents who successfully experienced the process of developmental/behavioral screening and diagnosis. This is particularly important for parents who are observably anxious or have numerous other life stressors. However, parents may not always reveal when they are distressed and it is probably best to have a uniform approach to offering parents on-going support.
9. Avoid giving screening results over the telephone. If this is not possible, alert parents that they may be confused and invite them to call back later if they have questions. This should reduce misinformation and resultant confusion and anxiety. Whether conveying results in person or over the phone, provide written information (e.g., a brochure about the referral source, a copy of the referral letter you write, etc.). This should help ensure that parents understand the results and implications.
10. Find social workers to help with families who are likely to have multiple barriers to following through with recommendations (e.g., single parents with low incomes and multiple life stressors).
11. Provide accurate written and verbal information. Communication about positive screening test results should clearly indicate that screens only tell whether a child is *more likely* to have a problems and that screens, while often correct, are not perfect: Children with true difficulties may not be identified and children who are coming along normally may fail a screen. Specifically, parents who raise significant concerns but whose children perform well on screening should benefit from being told that you will follow their children carefully and give them some suggestions about how to help in the interim (e.g., a parent education sheet on how to stimulate children's language). In this way, you have prepared parents for the possibility that screens may over- as well as under-identify difficulties, and you will have capitalized on a "teachable moment" by giving parents guidance in how to promote their child's development.
12. Be sure to follow carefully those children who fail screens but are not found to have problems. Most are performing below average and have many psychosocial risk factors. They need developmental promotion but also referrals to at-risk services such as Head Start, quality day care, after-school tutoring, summer programs, and their parents may need training or social work services.

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13. When children pass screening tests, offer praise and reassurance that learning and development appear to be coming along well. Also ask parents if there is information on child-rearing or behavior that would help them.

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CPT codes (Procedure Codes for Screening)

99202-99205	E&M*, Office Procedural Codes, new patient (append with -25 or -59 to indicate a stand alone service, i.e., developmental-behavioral screening)
99212-99215	E&M*, Office Procedural Codes, return patient (append with -25 or -59 to indicate a stand alone service, i.e. screening)
96110	Developmental-behavioral Screening (X 2, X 3, etc. if more than one screen is administered)

* E&M indicates evaluation and management

Suggested ICD-9 CM Codes:

Use generic terms to avoid future denials for treatment, such as:

783.4	Developmental Delay
309.23	Academic Inhibition (school problems)
315.4	Developmental Coordination Disorder
784.5	Other Speech Disturbance
309.3	Disturbance of Conduct

A far more complete guide to CPT codes for developmental and behavioral pediatrics can be found in:

*The Classification of Child and Adolescent Mental Diagnoses in Primary Care:
Diagnostic and Statistical Manual for Primary Care (DSM-PC) Child*

Available from www.aap.org or www.amazon.com.

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Developmental, Mental Health/Behavioral and Academic Screens

Compiled by Frances Page Glascoe, Ph.D. Professor of Pediatrics, Vanderbilt University, with assistance from other screening test authors and publishers whose works are described below.

The following chart is a list of measures that meet standards for screening test accuracy, meaning that they correctly identify, at all ages, at least 70% of children with disabilities while also correctly identifying at least 70% children without disabilities. All included measures were standardized on national samples, are proven to be reliable, and are validated against a range of diagnostic measures.

Measures are sorted into those that are most feasible in health care versus early childhood or other programs where there may be more time, skill, and, for educational programming purposes, a greater need to observe and directly test children during the process of screening.

General or broad-band screens are presented first. These cover the broad domains of development, i.e., cognitive/academic, language, motor, self-help). Some broad-band screens also cover social-emotional/behavioral/mental health.

A list of condition-specific or narrow-band tools follow. These measures should be administered only after problematic performance on a general screen and thus focus on only a few domains (e.g., autism spectrum disorder, developmental-behavioral/mental health status, etc.). The free evaluations and intervention services guaranteed through the Individuals with Disabilities Education Act (IDEA) are always the first best referral option. Nevertheless, narrow-band tools can help determine the need for simultaneous referrals to specialty clinics e.g., autism-specific, motor-disorders specific, etc.)

Throughout, the first column provides publication information, the cost of purchasing a specimen set, and the training options available. 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 an average salary of \$50 per hour) needed to administer and interpret each measure. Time/cost estimates do not include expenses associated with referring. 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 average percentage of parents with less than a high school education (who may or may not be able to complete measures in waiting rooms due to literacy problems and thus will need more time-consuming interview administrations). Measures in each table are arranged according to the time required to administer them by interview or directly to children, from least to most.

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Information about electronic options is included at the end of the table. Electronic applications can reduce human error, automate scoring, generate referral letters, and aggregate results which is helpful for program evaluation and quality improvement initiatives. While somewhat more costly than print, electronic options offer time-savers that offset the costs of hand-scoring, writing referral letters, etc.

- Please note:* 1) Not included are measures such as the Denver-II, DIAL-III, ESP, E-LAP, etc. because they fail meet standards (limited standardization, absent validation, and no proof of accuracy); measures such as the CAT-CLAMS (because they were not standardized on general populations); and/or measures of just a few developmental domains (e.g., language or motor);
- 2) Also not included are diagnostic measures such as the Vanderbilt Diagnostic ADHD Scale, because such tools should only be used after a broad-band screening test indicates the need (e.g., PSC, Connors, etc.). The rationale is that, for example, conditions that present as ADHD can actually be symptoms of other problems such as academic deficits, depression, anxiety, etc.;
- 3) In settings where there are health care providers, such professionals can and should, document carefully, both medical history and physical exam to determine whether organic conditions are contributory, a list of exam foci are described in a footnote.^a
- 4) When screening test results are problematic, referrals should begin with IDEA services. See footnotes for referral options.^b This allows intervention to commence even while children typically need to wait for medical specialty exams, autism focused clinics, etc. For medical professionals it may seem odd to refer for treatment before a diagnosis is finalized, but with young children (who are those who benefit most from early intervention), eligibility criteria are generally only a percentage of delay, and do not require specific nosology.

Screens for Primary Care* <i>(all rely on information from parents due to enhanced efficiency under time constraints. All cover development in all domains. Some also cover social-emotional, behavioral and mental health issues. Some can be administered by interview while others depend on parents, and optionally clinicians, to elicit skills). All also over at least some degree of compliance with the American Academy of Pediatrics, 2006 Statement on developmental-behavioral screening and surveillance.</i>					
BEHAVIORAL and/or DEVELOPMENTAL SCREENS RELYING ON INFORMATION FROM PARENTS	Age range	Description	Scoring	Accuracy	Time Frame/Costs
Parents' Evaluations of Developmental Status (PEDS). (2006) Ellsworth & Vandermeer Press, Ltd. 1013 Austin Court, Nolensville, TN 37135 Phone: 615-776-4121; fax: 615-776-4119 http://www.pedstest.com (\$30.00) See electronic options below. Training Options: downloadable slide shows with notes, case examples, and handouts, website discussion list (covering all screens), short videos coming soon) some live training.	Birth to 8 years	10 questions eliciting parents' concerns in English, Spanish, Vietnamese and many other languages. Written at the 4 th - 5 th grade level. Determines when to refer, provide a second screen, provide patient education, or monitor development, behavior/emotional, and academic progress. Provides longitudinal surveillance and triage.	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.	About 2 minutes (if interview needed) Print Materials ~\$.31 Admin. ~\$.88 Total = ~\$1.19

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<p>PEDS: Developmental Milestones (Screening Version) Ellsworth & Vandermeer Press, Ltd. 1013 Austin Court, Nolensville, TN 37135 Phone: 615-776-4121; fax: 615-776-4119 http://www.pedstest.com (\$275.00). Electronic options coming soon. Training Options: 2 minute movie on website, plus slide shows with notes, case examples, handouts, some live training, and a discussion list.</p>	0 – 8 years	<p>PEDS-DM consists of 6 – 8 items at each age level (spanning the well visit schedule). Each item taps a different domain (fine/gross motor, self-help, academics, expressive/receptive language, social-emotional). Items are administered by parents or professionals. Forms are laminated and marked with a grease pencil. It can be used to complement PEDS or stand alone. Written at the 2nd grade level. A longitudinal score form tracks performance. Supplemental surveillance measures focused on the AAP 2006 statement are included (see descriptions below): the M-CHAT, Family Psychosocial Screen, Pictorial PSC-17, the SWILS, the Vanderbilt ADHD scale, and the Brigance Parent-Child Interactions Scale. In English, Spanish and Taiwanese.</p>	<p>Cutoffs tied to performance above and below the 16th percentile for each item and its domain. On the Assessment Level, age equivalent scores are produced and enable users to compute percentage of delays.</p>	<p>Sensitivity (.75 - .87); specificity (.71 - .88 to performance in each domain. Sensitivity (.70 - .94); specificity (.77 - .93) across age</p>	<p>About 3 - 5 minutes Materials ~\$.02 Admin. ~\$1.00 Total ~\$1.02</p>
<p>Ages and Stages Questionnaire-3 (2009). Paul H. Brookes Publishing, Inc., PO Box 10624, Baltimore, MD 21285 (1-800-638-3775). (\$249.95 each for English or Spanish) www.agesandstages.com. See electronic options below. Training Options: purchasable videos, case examples, and live training</p>	4 to 60 months	<p>Parents indicate children's developmental skills on 25 – 35 items (4 – 5 pages) using a different form for each well visit. Reading level varies across items from 3rd to 12th grade. Can be used in mass mail-outs for child-find programs. In English, Spanish, French</p>	<p>Single pass/fail score for developmental status</p>	<p>Sensitivity ranged 70% to 90% at all ages except the 4 month level. Specificity ranged from 76% to 91%</p>	<p>about 15 minutes (if interview needed) Materials ~\$.40 Admin. ~\$4.20 Total = ~\$4.60</p>
<p>Narrow-band screens for young children <i>(for mental health, psychosocial risk, and autism spectrum disorder. These are valuable adjuncts in primary care and elsewhere but should <u>not</u> be used as the sole measure of developmental-behavioral status)</i></p>					
<p>Modified Checklist for Autism in Toddlers (M-CHAT) (1999). Free download at www.mchatscreen.com Included in the PEDS:DM. See electronic records options below. Training Options: none</p>	18 –60 months	<p>Parent report of 23 questions modified for American usage at 4-6th grade reading level. Available in multiple languages. Screens for Autism Spectrum Disorder (ASD). Downloadable scoring template and .xls files for automated scoring. Requires a follow-up interview (also</p>	<p>Cutoff based on 2 of 3 critical items or any 3 from checklist.</p>	<p>Initial study shows sensitivity at 90%; specificity at 99%. Future studies are needed for a full picture. Promising tool.</p>	<p>About 5 minutes (excluding follow-up interview) Print Materials ~\$.10 Admin. ~\$.88 Total = ~\$.98</p>

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		downloadable in English and Spanish, in response to problematic performance).			
Family Psychosocial Screening. Kemper, KJ & Kelleher KJ. Family psychosocial screening: instruments and techniques. downloadable at http://www.pedstest.com and included in PEDS: Developmental Milestones. Training Options: none	parents	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.	Refer/nonrefer scores for each risk factor. Also has guides to referring and resource lists.	All studies showed sensitivity and specificity to larger inventories greater than 90%	about 15 minutes (if interview needed) Materials ~\$.20 Admin. ~\$4.20 Total = ~\$4.40

SCREENS FOR OLDER CHILDREN (<i>these screens focus on academic skills and mental health, including ADHD screening. The shorter ones, such as the SWILS and PSC are suitable for primary care</i>)					
Safety Word Inventory and Literacy Screener (SWILS). Glascoe FP, Clinical Pediatrics, 2002. Items courtesy of Curriculum Associates, Inc. The SWILS can be freely downloaded at: http://www.pedstest.com/ and is included in the PEDS:DM Training Options: none	6 - 14	Children are asked to read 29 common safety words (e.g., High Voltage, Wait, Poison) aloud. The number of correctly read words is compared to a cutoff score. Results predict performance in math, written language and a range of reading skills. Test content may serve as a springboard to injury prevention counseling.	single cutoff score indicating the need for a referral	78% to 84% sensitivity and specificity across all ages	about 7 minutes (if interview needed) Materials ~\$.30 Admin. ~\$2.38 Total = ~\$2.68
Pediatric Symptom Checklist. Jellinek MS, Murphy JM, Robinson J, et al. Pediatric Symptom Checklist: Screening school age children for academic and psychosocial dysfunction. http://psc.partners.org/ The Pictorial PSC (PPSC) is useful with low-income Spanish speaking families and can be downloaded freely at www.dbpeds.org . <i>The factorable 17 item version is included in the PEDS:DM and facilitates screening for ADHD, internalizing and</i>	4 - 16 years.	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. Factor scoring is available for download at: http://www.pedstest.com/links/resources.html	Single refer/nonrefer score	All but one study showed high sensitivity (80% to 95%) but somewhat scattered specificity (68% - 100%).	About 7 minutes (if interview needed) Materials ~\$.10 Admin. ~\$2.38 Total = ~\$2.48

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externalizing disorders). Training Options: none					
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Electronic Records Options for Screening with Quality tools
(including online and other digital approaches to administration and scoring).

Essential definitions are:

Tablet PC--approaches that typically require a stylus to select among multiple choice answers;

Keyboards --users can type in text-based answers to questions

Touch-screens applications-- (hopefully self-explanatory but these often allow parents to also listen to questions and response options, thus reducing literacy demands);

Online --meaning an internet connection, preferably high speed is needed;

CD-ROM--offline but still electronic, and requiring installation on the users' computer);

Parent Portal -- applications (typically web-based and thus online) where parents can complete measures but do not see results. Rather these are sent to a different office computer for inclusion in the medical record/sharing results.

Webcasts/webinars--Either live or constantly available on publishers' websites. LiveWebcasts are generally translated into **Webinars** (a few days after a live webcast) and thus become **videos/audios**, usually freely available on demand.

Company	Training/ Support options	Description and Pricing
CHADIS (http://www.chadis.com/) <i>PEDS, ASQ, M-CHAT and other measures online for touch-screen, tablet PCs, keyboards, telephony and parent portal methods). Spanish language version coming soon.</i>	Downloadable guides, live training at exhibits, and other training services on request.	CHADIS also includes decision support for a large range of other measures, both diagnostic and parent/family focused, such as the Vanderbilt ADHD Diagnostic Rating Scale, and various parental depression inventories. CHADIS offers integration with existing EHRs. works with a range of equipment/applications, and automatically generates reports. Pricing is ~ \$2.00 per use.
EV Press/Forepath.org (www.pedstest.com) <i>PEDS in English and Spanish, M-CHAT</i>	Slide shows, website FAQs, email support,	This site offers PEDS and the Modified Checklist in Toddlers for applications including tablet PCs, keyboards (allowing for actual comments from parents). Offers a parent portal (wherein families do not see the results), etc. Scoring is automated as are summary reports for parents,

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<i>online for keyboard and tablet PCs. (PEDS:DM, and other translations coming ~ Fall, 2009)</i>	online videos, discussion list	referral letters when needed, and ICD-9/procedure codes. In English and Spanish (with other languages coming soon along with the PEDS:DM). Integration with electronic records is available as is data export and aggregate views of records. \$1.00 - \$2.00 per use (depending on volume).
Patient Tools (www.patienttools.com) <i>(PEDS, M-CHAT, ASQ, ASQ:SE and others measures online for tablet PCs forthcoming Spring 2010)</i>	Webcasts/webinars, live support by phone, email	Patient Tools offers the ASQ, ASQ:SE, MCHAT, PEDS, the Vanderbilt ADHD Scales and a wide range of behavioral/mental health measures for adolescents and adults. A parent portal approach is available via Survey Tablets. Equipment including docking stations is rented, lease-purchased, or purchased (\$74.00 - \$1320) after which \$58.00 per month is the ongoing cost of hosting, data storage, telephone technical & installation support. Copyrighted measures are licensed from their publishers and incur per use fees [e.g., <i>From www.pedstest.com (above) at \$1.00 - \$2.00 per use depending on volume].</i>
Brookes Publishing (www.agesandstages.com) <i>(ASQ via CD-ROM installed on keyboard computers, web-based scoring service coming in June 2008)</i>	Live training, online training, purchasable training videos, email listserv	ASQ on a CD-ROM enables users to click answers and receive an automated score. The software offers aggregation of results, report writing templates, and progress tracking.

© 2009, updated from Glascoe FP. *Collaborating with Parents* and Glascoe FP, Robertshaw NS, *PEDS: Developmental Milestones, Professionals' Manual*. Nashville, Tennessee: Ellsworth & Vandermeer Press, Ltd. Permission is given to reproduce this document. Information on lengthier screening tools suitable for use by Early Intervention providers, db pediatricians, and nurse practitioners can be found at www.dbpeds.org

***Footnote (a):**

Medical History and Physical Exam for Primary Care

Health care providers should conduct, along with developmental-behavioral screening tests, a thorough physical exam, at targeted well-visits:

Take note of such potentially teratogenic exposures as radiation or medications, infectious illnesses, fever, addictive substances, or trauma, and review results of neonatal screens including phenylketonuria, hypothyroidism, and other metabolic conditions. Your review should also consider the perinatal history, including birth weight, gestational age, Apgar scores, and any medical complications. Postnatal medical factors to be considered such as chronic respiratory or allergic illness, recurrent otitis, head trauma, and sleep problems including symptoms of obstructive sleep apnea. Family risk factors should be discussed (or captured via the Family Psychosocial Screen) and noted in the child's chart. These should include parental history of depression or anxiety, family history of developmental disabilities, and substance abuse including smoking, etc.

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The physical examination should include attention to growth parameters, head shape and circumference, facial and other body dysmorphism, eye findings (e.g., cataracts in various inborn errors of metabolism), vascular markings, and signs of neurocutaneous disorders (e.g., café-au-lait spots in neurofibromatosis, hypopigmented macules in tuberous sclerosis), muscle strength, tone, presence of abnormal reflexes, and disturbance of movement. For guidance in conducting a pediatric neurodevelopmental exam, the following online video is helpful: http://library.med.utah.edu/pedineurologicexam/html/home_exam.html. Vision and hearing screening are essential. Lead screening should be provided whenever developmental problems arise, but preferably for all children and, repeated at several points during the 0 – 6 year age range.

***Footnote (b):**

National Referral Resources: Links to Commonly Needed Services

For locating state, regional and local early intervention programs under the Individuals with Disabilities Education Act, and testing services for young children with suspected or known disabilities go to **www.nectac.org**

American Academy of Pediatrics: Find a Pediatrician (**www.aap.org/referral/**) to locate general as well as developmental-behavioral, neurodevelopmental, and other subspecialty pediatricians.

For help locating Head Start programs see **www.ehsnrc.org/**

For help locating quality preschool and day care programs visit **www.childcareaware.org**, and **www.naeyc.org/**

For help locating parent training programs see **www.patnc.org** and the YWCA **www.ywca.org**

For locating services for school age children, call the school psychologist or speech-language pathologist in the child's school of zone.

For help locating mental health services go to **www.mentalhealth.org**

For services and information about autistic spectrum disorders go to **www.firstsigns.org**

Social services including domestic violence, child abuse and neglect, adoption, state, and local services, etc. can be found at **www.acf.hhs.gov**

For after school programs, check with the child's school of zone, as well as these sites: the Boys and Girls Club **www.bgca.org**, and the YWCA **www.ywca.org**

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