

Developmental Checkups for All Children

Three Good Choices for Practices and Providers: ASQ, PEDS, and PEDS: DM

By Margaret Dunkle and Janet Hill

Every young child needs regular developmental checkups. Quick, easy developmental screening picks up problems before they become obvious or have a chance to fester and grow. It also opens the door to intervention early on, when it can do the most good.

Early intervention works. And the sooner a possible problem is spotted and effectively addressed, the sooner the child will reap the benefits. Developmental screening tools alert providers to areas of a child's development – from movement and mental health to language and learning – where they need to take a closer look and follow up with assessment, diagnosis, services, and treatment.



Regular developmental checkups with a good screening tool are as much a part of good pediatric practice as regularly measuring a child's height and weight.

The AAP recommends that physicians do developmental screenings with a high-quality tool at least 3 times before a child's third birthday – at the 9-month, 18-month, and 24- or 30-month pediatric visits. <http://pediatrics.aappublications.org/cgi/reprint/118/1/405.pdf> For preschoolers (children ages 3-5), the AAP also recommends regular developmental screenings. <http://www.pediatrics.org/cgi/content/full/108/1/192>

Three general developmental screening tools (*see chart on page 14*) stand out from the rest – ASQ (*the Ages and Stages Questionnaires*), PEDS (*Parent's Evaluation of Developmental Status*), and PEDS:DM (*PEDS: Developmental Milestones*). These tools cover all developmental domains and:

- Are accurate – correctly identifying at least 70% of infants, toddlers, and preschoolers with and without disabilities, delays, or developmental problems – and backed up by solid research;
- Are short, low cost, and easy to administer and score;
- Rely on what parents know and observe about their child, which also makes them appropriate across many cultures;
- Can be completed in many settings – in a pediatric or family medicine practice, in a child care center or Head Start program, during a home visit to a family with a young child, or even online; and
- Provide a great way to communicate with parents, make the most of every well-child visit, and comply with state and federal requirements.

These 3 tools are billable under CPT Code #96110 (developmental screening) in fee-for-service medical settings, compatible with electronic medical records (EMR), and either already available online or will be shortly.

ASQ, PEDS and PEDS:DM are alike in that they are all high-quality. They also have some differences: for example, the age ranges they cover, the time they take to administer and score, available languages and reading level, the questions they ask, and their “feel.”

A health care provider cannot go wrong with any of these tools. The table below provides information about ASQ, PEDS and PED:DM so that a provider can make the right choice for his or her office or practice.

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| Developmental Checkups – Three Good Choices for Practices and Providers: ASQ, PEDS, and PEDS:DM* | | | | | | | | | | |
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| Margaret Dunkle | | | | | | | | | | |
| Tool | Description | Developmental Domains Covered | Accuracy** | Age Range | Adm. Time | Scoring | The Science Behind the Tool | Languages & Reading Level | Costs | To Purchase & for Details |
| ASQ <i>Ages and Stages Questionnaires</i> Parental-report about a child's skills & behavior | 30 questions (answered <i>yes, sometimes, not yet</i>), plus 7-8 unscored <i>Overall</i> questions. Parents indicate a child's developmental skills, using one of 19 age-specific questionnaires. | All Domains Covered communication, gross motor, fine motor, problem-solving, and personal-social skills | <i>Sensitivity:</i> 70-90% <i>Specificity:</i> 76-91% | 4-60 months (5 years) Can be given as young as 3 months | 15-30 minutes | Pass/fail score for each developmental domain. Provides a cutoff score in each developmental domain (2 standard deviations below the mean). | Standardized on 8,530 children from diverse ethnic and socio-economic backgrounds, including Spanish-speaking. Validated on 1,613 children. Published validation studies. | English, Spanish, French and Korean Vietnamese expected in 2009. Unpublished versions in additional languages available from publisher. Reading level varies from 3rd to 12th grade. | <i>Initial purchase:</i> \$199 per kit (either paper or CD-ROM), including <i>ASQ User's Guide</i> and 19 age-specific forms to be copied as screenings are done. <i>To administer, score, interpret each screen:</i> \$4.60 (copying age-specific forms and staff time). | Paul H. Brookes Publishing Company, PO Box 10624, Baltimore, MD 21285, 800-638-3775; www.brookespublishing.com and www.agesandstages.com . <i>For ASQ-Online (expected 2009), see www.patienttools.com.</i> |
| PEDS <i>Parents' Evaluation of Developmental Status</i> Parental-report about parental concerns | 10 questions (the same for all ages, answered <i>yes, no, a little</i>). Parents identify "concerns" they have in each developmental domain. | All Domains Covered expressive language and articulation, receptive language, gross motor, fine motor, school, self-help, social-emotional, behavior, and global-cognitive | <i>Sensitivity:</i> 74-79% <i>Specificity:</i> 70-80% | 0-95 months (7 years, 11 months) | 2-10 minutes | Low, moderate or high risk for each developmental domain. Provides algorithm to determine whether to refer, do additional screening, or reassure parents that development is normal. | Standardized on 6,360 children from diverse ethnic and socio-economic backgrounds, including Spanish-speaking. Validated on 1,279 children. Published validation studies. | English, Spanish, Arabic, Chinese, French, Haitian-Creole, Indonesian, Laotian, Malaysian, Portuguese, Russian, Somali, Swahili, Taiwanese, Thai and Vietnamese 4th to 5th grade reading level. | <i>Initial purchase:</i> \$30 for starter set, including <i>Brief Guide to Scoring and Administration</i> , and Scoring and Interpretation forms for 50 children. Bulk discounts for Scoring and Interpretation forms. <i>To administer, score, interpret each screen:</i> \$1.20 (purchase copies of one-page PEDS forms and staff time). <i>Cost per screen of PEDS-Online</i> ranges from \$1-\$2 if licensed by a provider to \$9.95 if done individually online. | Ellsworth & Vandermeer Press LLC, 1013 Austin Court, Nolensville, TN 37135, 888-729-1697, fax 615-776-4121; http://www.peds-test.com . <i>To request a trail license for PEDS-Online, email glascofp@pedstest.com.</i> |
| PEDS:DM <i>PEDS: Developmental Milestones</i> Parental-report about a child's skills & behavior | 6-8 items or questions , depending on the age level. Parents indicate a child's developmental skills, using one of 22 age-specific questionnaires. | All Domains Covered expressive and receptive language, gross motor, fine motor, self-help, social-emotional, behavior, and (for older children) reading and math | <i>By domain:</i> <i>Sensitivity:</i> 75-87% <i>Specificity:</i> 71-88% <i>Across ages:</i> <i>Sensitivity:</i> 70-94% <i>Specificity:</i> 77-93% | 0-95 months (7 years, 11 months) | 3-5 minutes | Pass/fail score for each developmental domain. Provides a cutoff score for children below the 16th percentile in each developmental domain. The <i>Assessment Version</i> enables users to compute age-equivalent scores and percentage of delayed or advanced development. | Standardized on 1,296 children from diverse ethnic and socio-economic backgrounds, including Spanish-speaking. Published validation studies. | English and Spanish Less than 2nd grade reading level. | <i>Initial purchase:</i> \$275 for kit, including reusable laminated form, grease pen, <i>Family Book</i> , <i>Professionals' Manual</i> , Case Study and 100 patient recording forms. <i>To administer, score, interpret each screen:</i> \$1.10 (purchase scoring forms and staff time). | Ellsworth & Vandermeer Press LLC, 1013 Austin Court, Nolensville, TN 37135, 888-729-1697, fax 615-776-4121; http://www.pedstest.com . |

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There are two types of **accuracy. **Sensitivity** refers to the percentage of children with a disability or problem who are correctly identified by the screening tool. **Specificity** refers to the percentage of children without a disability or problem who are correctly identified by the screening tool.

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