##

**[This is a for-credit online course currently available from the American Academy of Pediatrics]**

**Title: Recognizing early motor delays at the two-month pediatric well visit**

**Faculty:**

**Faculty - AAP**

1. H. Garry Gardner, M.D., FAAP - Dr. Gardner has a private pediatric practice in Darien, IL. He is a Clinical Professor of Pediatrics at Children's Memorial Hospital and is Co-Chair of the Medical Advisory Board at the DuPage Easter Seal Center in Lisle, IL. Past- President of Illinois Chapter, American Academy of Pediatrics. He is Co-Chair of the Medical Round Table of the Pathways Awareness Foundation.
2. John F. Sarwark, MD, FAAP, FAAOS - Dr. Sarwark is Martha Washington Professor of Orthopedic Surgery and Division Head of the Division of Pediatric Orthopedic Surgery at Children's Memorial Hospital, Chicago and Professor of Orthopedic Surgery, Northwestern University Feinberg School of Medicine. He is Co-Chair of the Medical Round Table of the Pathways Awareness Foundation.
3. Lori Walsh, M.D., - Dr. Walsh has a private pediatric practice in Glenview, Illinois.

**Faculty – Other**

1. Gay Girolami, P.T., M.S., FAACPDM - Ms. Girolami is the Executive Director of the Pathways Center for Children in Glenview, IL. She is currently enrolled in a doctoral program in Motor Control and Learning in the Department of Movement Sciences at the University of Illinois at Chicago.

**References (2 to 4):**

* [www.pathwaysawareness.org](http://www.pathwaysawareness.org)
* [www.wemove.org](http://www.wemove.org)
* From Neurons to Neighborhoods: The Science of Early Childhood Development, 2000, Institute of Medicine (IOM) (<http://www.nap.edu/openbook.php?record_id=9824&page=188>)
* American Academy of Pediatrics Committee on Children with Disabilities. Developmental Surveillance and Screening of Infants and Young Children. *Pediatrics*. 2001 July;108(1):192-195. Available at: <http://pediatrics.aappublications.org/cgi/content/abstract/108/1/192>]
* **Council on Children With Disabilities, Section on Developmental Behavioral Pediatrics, Bright Futures Steering Committee and Medical Home Initiatives for Children With Special Needs Project Advisory Committee.** Identifying Infants and Young Children with Developmental Disorders in the Medical Home: An Algorithm for Developmental Surveillance and Screening. ***Pediatrics*.** 2006 July;118(1):405-420. Available at: [http://aappolicy.aappublications.org/cgi/content/full/pediatrics;118/1/405](http://aappolicy.aappublications.org/cgi/content/full/pediatrics%3B118/1/405)

**Objectives:**

* Recognize the early signs of infant developmental delays, specifically atypical movement and posture during the two-month health care maintenance examination
* Understand the importance of “surveillance” vs. “screening” for early motor development issues consistent with the AAP Bright Futures Program
* Use surveillance skills to monitor early motor development at every checkup, and refer any child with atypical development to a therapist with a specialty in pediatrics for appropriate screening with tools such as the Test of Infant Motor Performance (TIMP), Alberta Infant Motor Scales (AIMS), Bayley Infant Neurodevelopmental Screener (BINS), etc.

**Introduction (50 words):**

Today, one in 40 children born in the U.S. has an early motor delay

* As many as 400,000 children each year are at risk.
* Detecting the signs of an early motor delay in children is possible at two months of age and providing the right intervention helps provide the best possible outcome.

**What Is Different? (350 to 450 words)**

**Sharp increase in cases of early motor delays**

The number of children with early motor delays has increased dramatically in the past 25 years, from one in 100 births to one in 40 today.[[1]](#endnote-1) Members of the American Academy of Pediatrics Council on Children with Disabilities estimate that as many as 400,000 children born each year are at risk for some form of early motor delay. These numbers are considerably higher than the incidence of autism (1 in 166) which has received the lion’s share of attention in recent years.

Reasons for the sharp increase include:

* Increase in number of multiple births
* Increase in number of premature births
* Increased survival rate of children with cardiac, neurological and genetic disorders
* Post-birth positioning – early motor delays may be an unintended consequence of back sleeping to prevent SIDS[[2]](#endnote-2)
* Improved screening and identification

**Early motor delay: definition**

The term “early motor delay” describes a wide variety of conditions, ranging from low muscle tone to cerebral palsy. A child with an early motor delay could exhibit any of the following conditions: poor head and neck control, muscle stiffness, speech delays, swallowing difficulties, a body posture that is limp or awkward, clumsiness, spasms or delayed sitting or walking. A motor delay is not a disease, is not inherited, and rarely includes a mental condition.

**Identification**

Physician observation remains critical to early identification and intervention for early motor delays, but current pediatrician development checklists can miss signs of an early motor delay. Severe motor abnormalities are usually detected at birth, but milder early motor delays typically manifest **as early as two months.** To detect early motor delays, the focus needs to be on the **quality** and **symmetry** of the movement rather than the existence or non-existence of a movement. For example, at two months, physicians look for the child to smile and respond to a parent’s voice. However, while the child may be smiling and responding to his parents, it’s important for the physician to also observe whether the child is only looking to one side when responding, which is a signal for a potential early motor delay.

**Importance of early identification and intervention**

Early intervention is critical. Synapse development for motor skills, seeing and hearing actually peaks at three months[[3]](#endnote-3) which is why timely physical therapy is so effective. At this vital time in a child’s development, identification of an early motor delay and therapy can help children master basic life skills that might otherwise remain unattainable. Earlier intervention can lead to better outcomes for the child and the family.

The good news for clinicians is that lengthy neurodevelopmental examinations aren’t needed to spot an early motor delay, and early motor delays, even the milder forms, are observable at the two-month age under surveillance [hyperlink] consistent with the AAP Bright Futures Program. [POP UP BOX: Surveillance dislodges doctors from a “schedule” mentality (“At two months, look for X. At four months, look for Y”). Surveillance is a continuous process in which medical professionals perform skilled observations of children during the provision of health care, including listening to parental concerns, obtaining a relevant developmental history, making accurate and informative observations of children, and sharing opinions and concerns with other relevant professionals.[[4]](#endnote-4)]What is needed is consistent, disciplined surveillance.

**This course will present eight critical positions that can indicate whether an early motor delay is present, and all positions easily can be observed in babies at two months of age.** Once you learn some of the warning signs of atypical development, you can integrate these skills into a typical 2-month well visit, with the goal of referring children to a specialist as early as possible if atypical development is suspected.

**Consequences for the child and family**

An early diagnosis of a motor delay can save the guilt most parents feel when a problem is diagnosed later. In cases where children are diagnosed at six or nine months, parents often realize they saw early signs of atypical movement and feel they are at fault for not mentioning symptoms to their doctor earlier or advocating further screening.

Clinicians should note the long-term effects of what an early motor delay could mean to a child and family. On one end of the spectrum, most children may only need temporary corrective therapy, if any, and may not face a protracted period of disability. However, on the other end of the spectrum, it is not productive to set unreasonable expectations for absolute normalcy. A child with atypical gait who has improved enough to run down the hall faster than parents is going to go on to a full and productive life.

**EXAMPLES – TYPICAL VS. ATYPICAL TWO-MONTH MOTOR SKILLS DEVELOPMENT**

**[NOTE: We will add to this section with photo, video and text explaining typical and atypical movements of 2-month-olds. Video is approx. 16 minutes: 8 positions X 2 babies X 1 min. per segment]**

The photos below and accompanying video compare the movements of two-month-olds developing typically or atypically. Physical therapists typically examine infants in eight positions: supine, sidelying, prone, pull-to-sit, sitting, horizontal suspension, protective extension and standing. These eight positions are part of a comprehensive exam developed by Dr. Elsbeth Kong, nationally recognized as one of the leading experts on early motor delays. Regardless of the methodology employed, it is critical to observe the infant in more than one position.

Watching the comparisons side-by-side, the differences may seem extreme. However, please note that:

* Many clinicians maintain that early motor delays cannot be detected as early as two months
* Delays run along a continuum. Use this video and photos as a guide to infer whether or not your patient should be referred to a specialist
* If you have any concerns at all, please refer your patient to a developmental specialist such as a neurologist, or pediatric physical or occupational therapist.

Photos and video provided courtesy of Pathways Awareness ([www.pathwaysawareness.org](http://www.pathwaysawareness.org))

|  |  |  |  |
| --- | --- | --- | --- |
| Typical Development | Photos | Atypical Development | Photo |
| **1. Supine** |
| * Maintains head in midline for brief periods
* Locates objects visually and tracks from left to right
* Beginnings to show antigravity movements of upper and lower extremities
* Not yet able to reach for toys or lift both legs toward tummy
 |  | * May show more asymmetrical movement; predominance of head to one side; or strong assymetrical tonic neck reflex. Less spontaneous head turning
* Difficulty visually tracking, may only track to one side or only to midline Decreased ability to generate upper and lower extremity antigravity movements
* Longer periods of inactivity
 |  |
| **2. Sidelying** |
| * Able to lift head and upper trunk during facilitated roll, showing

lateral head-righting* Balance of flexors and extensor muscles of the trunk
* Ability to change from predominant use of flexors to use of extensors and position requires
 |  | * May be unable to right head during facilitated rolling
* May look competent in this position, so important to observe baby in all eight positions
 |  |
| **3. Prone** |
| * Some head lifting and extension through upper thoracic spine
* Hips and knees beginning to move from flexed “newborn” posture into extended, abducted position, freeing upper body for head and trunk lifting
* Elbows typically not yet in line with shoulders, but should see this by 3 months
 |  | * Posture looks more like a newborn; infant does not extend hips and knees from flexed abducted posture.
* No independent head lifting; can move head only with adult intervention
 |  |
| **4. Pull to Sit** |
| * Head-lag is typical until the infant is about 15 degrees from upright.
* Uses shoulder elevation and elbow flexion to assist
* Able to engage neck muscles to sustain upright head control in midline
* Spinal extension through the cervical and upper thoracic areas
 |  | * May exhibit head lag through the entire pull to sit maneuver.
* Poor upright head control
* Little muscle activity in the upper extremities or cervical spine
* Rounding of the thoracic and lumbar spine
 |  |
| **5. Sitting** |
| * Head is aligned with ear directly over the shoulder
* Holds and sustains posture with some assistance
* Head turning not yet developed in this position; should see in the next month
 |  | * Needs more support to sustain sitting posture
* Inability to achieve and sustain head lifting into upright position
* Little to no use of arms
 |  |
| **6. Horizontal Suspension** |
| * Able to activate adequate neck and trunk extension to sustain posture
* Can maintain brief periods of head control , but may not be in midline
 |  | * Difficulty or inability to activate neck or upper thoracic extensors to lift head
* Unsuccessfully tries to move arms and legs to initiate movement
 |  |
| **7. Protective Extension** |
| * Aware of being tilted forward; increases head and neck extension
* Will not be fully able to bring arms forward and fully extend head and neck for protection until 6 months
 |  | * Unable to generate head and trunk activity
 |  |
| **8. Standing** |
| * Able to sustain weight on lower extremities with support at the trunk
* Intermittent bouts of extension and flexion typical
* Good vertical alignment from head through trunk and feet
 |  | * May support little if any weight on feet
* Little or no intermittent muscle activity to attain or maintain standing
 |  |

**Impact (350 to 450 words)**

The potential impact of identifying an early motor delay at two months or younger is immense. It may indeed result in earlier acquisition of developmental motor skills and improve the long-term quality of the child’s life.

**Fewer patients will slip through the cracks**

According to a recent study, two-thirds of children with developmental problems may be falling through the cracks. “It has been estimated that while approximately 12 to 16 percent of children experience developmental problems, only one-third of those children—usually those with the most obvious conditions—are identified in pediatric practices prior to school entry.”[[5]](#endnote-5) Although this refers to school-age children, what this means is that a significant number of delays aren’t being detected in pediatric visits. Another study reported that “only 57 percent of parents report their child’s development ever being assessed within a pediatric visit.[[6]](#endnote-6)

**Positive Outcomes**

Mild early motor delays may correct on their own, but in some cases, they become more exaggerated and require more extensive therapy and even surgical intervention when not treated early. For example, a baby with torticollis is at risk for developing plagiocephaly, and possibly impaired binocular vision. On the other hand, with intervention, more normal head and neck movement can be facilitated, reducing the possibility of developing a more permanent plagiocephaly.

**Surveillance – more than screening**

A typical baby will see a pediatrician two to three days after hospital discharge, with subsequent two-week, one-month, two-month, four-month and six-month visits. At each visit, doctors and staff screen for developmental milestones and other possible medical conditions. However, clinicians need to consider the importance of surveillance for early motor delays.

Surveillance dislodges doctors from a “schedule” mentality (“At two months, look for X. At four months, look for Y”). Dworkin defined developmental surveillance as “a flexible, continuous process whereby knowledgeable professionals perform skilled observations of children during the provision of health care. The components of developmental surveillance include eliciting and attending to parental concerns, obtaining a relevant developmental history, making accurate and informative observations of children, and sharing opinions and concerns with other relevant professionals.”[[7]](#endnote-7)

Surveillance means that checking for an early motor delay should be included in every well visit starting at two months. This course module recommends looking for atypical movement patterns in eight standard positions. This would include the quality of a child’s movement. Is the child symmetrical or does he have decreased variety of movement? Is the child looking to one side only? Is the child only using one hand or leg?

**Be familiar with current screening tools**

**Pediatric Physician Surveillance and Screening Tools**

|  |  |  |
| --- | --- | --- |
| **Test (name and link)** | **Description** | **Approximate time to administer** |
| **PEDS (www.pedstest.com)** | **PEDS is an evidence-based surveillance tool and a screening test with ten short questions to parents.** | **5 minutes plus scoring time and interpretation.** |
| **Ages & Stages****(www.agesandstages.com)** | **ASQ is a series of questionnaires for parents that screen and monitor a child’s development between 4 months and 5 years of age to determine if the child is on track or if he or she should receive a more in-depth assessment.** | **10-15 minutest to complete and about 2 minutes to score.** |

**Pediatric Therapist Surveillance and Screening Tools**

|  |  |  |
| --- | --- | --- |
| **Test (name and link)** | **Description** | **Approximate time to administer** |
| **Test of Infant Motor Performance (TIMP)** | **Assesses the postural and selective control of movement needed for functional motor performance in early infancy between the ages of 34 weeks postconceptional age and 4 months post-term. The TIMP has been shown to provide accurate assessment of infant performance in two week intervals.**  | **20 – 30 minutes** |
| **Alberta Infant Motor Scales (AIMS)** | **The AIMS is a reliable norm-referenced observational motor assessment that has been validated for use from term to 18 months of age with infants born preterm and full term (86-88). The AIMS measures qualitative aspects of movement and it is sensitive to changes in infant’s motor performance.** | **15 – 20 minutes** |
| **Bayley Infant Neurodevelopmental Screen (BINS)** | **Developmental Screening Test for ages 3-24 months, which tests 10-13 age-adjusted items**  | **10-15 minutes**  |

**Coding instructions**

Coverage will vary by insurance plan:

* It is important for the parents and/or health care provider to check with the insurance plan prior to treatment to ensure that patients will receive optimal coverage.
* Not all codes will be covered by all plans.

DSM-PC and ICS-9-CM diagnosis codes for early motor delay

|  |  |
| --- | --- |
| **CODE** | **DESCRIPTION** |
| 781.3 | Developmental coordination problem [ICD-9-CM descriptor: Lack of coordination] |
| 783.42  | Delay in developmental milestones |
| 783.40  | Developmental delay, unspecified/lack of normal physiological development, unspecified\* |
| 315.4 | Developmental coordination disorder |
| 315.8 | Other specified delays in development |
| 315.9 | Unspecified delay in development (developmental disorder not otherwise specified) |

\*Typically not covered by insurance plans; other diagnostic codes are more likely to be covered

### Application (350 to 450 words)

Learning how to identify typical vs. atypical development is one piece of the puzzle. How can this new knowledge be put into practice?

**Two-month well-baby visit: integrating early motor delay surveillance**

Early motor delay surveillance does not have to add significant time to the child’s appointment. The PEDS test can be completed during an exam, and parents can complete the Ages & Stages questionnaire prior to or as a follow-up to the physical exam.

However, visually noting what to look for from the video and photographs provided here will help in surveillance efforts. Office staff can also be recruited to take note of movements which might be atypical making these observations during pre-appointment activities such as measuring weight and height.

Additional questions to ask parents include:

* Can your baby lift his head, at least momentarily, when prone and turn it from side to side?
* When you are close to your baby's face, will she look at you with steady eye contact and follow you with her eyes when you move?

**Using available resources**

In the case of early motor delays, a picture is worth a thousand words, and video is worth thousands more. Video and photos of development, both typical vs. atypical, at two and six months are available at [www.Pathwaysawareness.org](http://www.Pathwaysawareness.org). A quick refresher of these materials every six months will keep the issue in the forefront, and help you and your staff identify potential early motor delays.

**Referring for screening**

If you have assessed a child for risk factors and observed a potential early motor delay, the next step is to refer the child for screening by a specialist.

When referring a child for a screening, the primary responsibility of the physician is to provide accurate diagnostic information concerning the child’s condition. Although the cause of the delay may not be apparent, the physician should provide information concerning the impairment.

In addition to the primary problem, other associated conditions should be included, as well as any precautions related to the conditions. An example would be a child with seizures and cerebral palsy. Seizure risk should be identified so that the therapists can be aware of any related potential medical emergencies. The physician is responsible for indicating any medical conditions that may be adversely affected by therapy, such as osteoporosis in a child taking steroids.

If therapy is the recommended course of action after a specialized screening, the therapist’s prescription should include type and frequency of therapy, and functional therapy goals. It is important for the physician to work with the family and team of therapists to determine treatment time and duration. Close collaboration of the physician and the therapist is essential in maximizing the child's functional outcome and utilization of resources.

**Additional Resources**

* Pathways Awareness www.pathwaysawareness.org
* Neuro-Developmental Treatment Association (NDTA) [www.ndta.org](http://www.ndta.org)
* American Physical Therapy Association (APTA) [www.apta.org](http://www.apta.org)
* American Occupational Therapy Association (AOTA) [www.aota.org](http://www.aota.org)
* American Academy for Cerebral Palsy and Developmental Medicine (AACPDM) www.aacpdm.org
* We Move: Worldwide Education and Awareness for Movement Disorders, [www.wemove.org](http://www.wemove.org)
* Easter Seals [www.easterseals.com](http://www.easterseals.com)
* State-by-state Early Intervention resources [www.nichcy.org/states.htm](http://www.nichcy.org/states.htm)
* American Academy of Pediatrics <www.aap.org>

**Anticipated needs (350 to 450 words)**

Materials—including media-based tools—are readily available.

To incorporate early motor delay surveillance into practice, doctors should:

* Keep visual materials handy at every visit
* Refer back to video materials at [www.PathwaysAwareness.org](http://www.PathwaysAwareness.org)
* With all staff, discuss prevalence of early motor delays and identifying signs so everyone can assist in detecting early motor delays
* Keep parent resources available in your office, such as the AAP-endorsed brochure [“Assure the Best for Your Baby’s Development”](http://www.pathwaysawareness.org/files/PAF_English_January_2007.pdf)
* Make yourself familiar with local resources for screening. The following organizations can provide a starting point:
	+ Pathways Awareness [www.pathwaysawareness.org](http://www.pathwaysawareness.org)
	+ Neuro-Developmental Treatment Association (NDTA) [www.ndta.org](http://www.ndta.org)
	+ American Physical Therapy Association (APTA) [www.apta.org](http://www.apta.org)
	+ American Occupational Therapy Association (AOTA) [www.aota.org](http://www.aota.org)
	+ Easter Seals [www.easterseals.com](http://www.easterseals.com)
	+ State-by-state Early Intervention resources [www.nichcy.org/states.htm](http://www.nichcy.org/states.htm)

**Assessment Questions:**

How do learners know the objectives were achieved?

Upon completion of the Hot Topics module, the learner will be able to answer and complete the assessment questions.

1. The increase in early motor delays is believed to be due to:
	* + - 1. An increase in the number of multiple births
				2. An increase in the number of premature births
				3. Increased survival of children with cardiac, neurological and genetic disorders
				4. Post-birth positioning
				5. All of the above

**e.) (Correct).** In addition to increases in multiple and premature births in recent years, children born with cardiac, neurological, and genetic disorders are also experiencing increased survival. These conditions are believed to be associated with the increasing incidence of early motor delays. Early motor delays may also be an unintended consequence of back sleeping to prevent SIDS. All of these factors are believed to impact the increasing rates of early motor delays.

**a.) (Incorrect).** This answer is incorrect because while the increase in the number of multiple births is one reason for the increase in early motor delays, other factors are believed to impact this rate. Please see **e.)** for a full explanation.

**b.) (Incorrect).** This answer is incorrect because while the increase in the number of premature births is one reason for the increase in early motor delays, other factors are believed to impact this rate. Please see **e.)** for a full explanation.

**c.) (Incorrect).** This answer is incorrect because while the increase in the survival of children with cardiac, neurological and genetic disorders is one reason for the increase in early motor delays, other factors are believed to impact this rate. Please see **e.)** for a full explanation.

**d.) (Incorrect).** This answer is incorrect because while early motor delays may be an unintended consequence of back sleeping in order to prevent SIDS, other factors are believed to impact this rate. Please see **e.)** for a full explanation.

1. The purpose of surveillance in early childhood development is to:
	* Establish a diagnosis
	* Look for and monitor signs that a young child may be delayed in one or more areas of development
	* Determine whether more in-depth assessment is needed
	* Both **a.** and **b.**
	* Both **b.** and **c.**

**a.) (Incorrect).** This answer is incorrect because the purpose of surveillance is not to diagnose, but rather to look for and monitor signs that a young child may be delayed in one or more areas of development and to determine whether more in-depth assessment is needed.

**b.) (Incorrect).** This answer is incorrect because the purpose of surveillance is not only to look for and monitor signs that a young child may be delayed in one or more areas of development but also to determine whether more in-depth assessment is needed.

**c.) (Incorrect).** This answer is incorrect because while surveillance will help determine whether or not more in-depth assessment is needed, in order to make that determination, one must look for and monitor signs that a young child may be delayed in one or more areas of development.

**d.) (Incorrect).** This answer is incorrect because the purpose of surveillance is not to diagnose, but rather to look for and monitor signs that a young child may be delayed in one or more areas of development and to determine whether more in-depth assessment is needed.

**e.) (Correct).**

1. At two months, it is possible to detect an early motor delay. Describe three observations that might be associated with an early motor delay and warrant further surveillance or referrals.
	* A child with an early motor delay could exhibit any of the following conditions: asymmetrical movement, predominance of head to one side, unable to independently lift head in prone, more “newborn” looking posture in prone (hips and knees in flexion), longer periods of inactivity, unable to achieve head-lifting in sitting, unable to support any weight on feet in standing.

### Resources

* Pediatric surveillance and screening tests: PEDS ([www.pedstest.com](http://www.pedstest.com)) and Ages & Stages ([www.agesandstages.com](http://www.agesandstages.com))
* [Assure the Best for Your Baby’s Physical Development](http://www.pathwaysawareness.org/files/PAF_English_January_2007.pdf) (AAP-endorsed parent brochure)
* [Essential Tummy Time Tools for Newborns](http://www.pathwaysawareness.org/?q=node/1385) (parent video)
* [Tummy Time Guide](http://www.pathwaysawareness.org/files/Pathways%20Tummy%20Time%20PDF%203-2.pdf) (parent brochure)
* [From Neurons to Neighborhoods: The Science of Early Childhood Development, 2000, Institute of Medicine (IOM)](http://www.nap.edu/catalog.php?record_id=9824)

### Thank you: 50 words

Thank you for taking the time to learn about this important subject. With the increasing prevalence of early motor delays, we hope that this Hot Topics course has provided you with the skills and tools to incorporate continuous surveillance in your pediatric practice, identify early motor delays at the two-month visit, and refer children for further screening to ensure the best possible outcome.

1. Statistics compiled by the Pathways Awareness Medical Round Table from a variety of sources, including the March of Dimes, *Pediatrics* Annual Summary of Vital Statistics, and the Centers for Disease Control and Prevention [↑](#endnote-ref-1)
2. **Influence of supine sleep positioning on early motor milestone acquisition. *Dev Med Child Neurol.*  2005; 47(6):370-6; discussion 364 (ISSN: 0012-1622) and National Survey of Pediatric Experts Indicates Increase in Infant Delays (press release):** <http://www.pathwaysawareness.org/?q=node/1371> [↑](#endnote-ref-2)
3. (From Neurons to Neighborhoods: The Science of Early Childhood Development, 2000, Institute of Medicine (IOM), <http://www.nap.edu/openbook.php?record_id=9824&page=188>), [↑](#endnote-ref-3)
4. Dworkin PH Detection of behavioral, developmental, and psychosocial problems in pediatric primary care practice. *Curr Opin Pediatr* 1993; 5:531-536 [[Medline]](http://aappolicy.aappublications.org/cgi/external_ref?access_num=7506962&link_type=MED) [↑](#endnote-ref-4)
5. Quality of Preventive Health Care for Young Children: Strategies for Improvement, Neal Halfon, M.D., M.P.H., Moira Inkelas, Ph.D., M.P.H., Melinda Abrams, M.S., and Gregory Stevens, Ph.D., M.H.S., The Commonwealth Fund, May 2005 [↑](#endnote-ref-5)
6. 17 Halfon N, Regalado M, Sareen H, Inkelas M, Reuland CP, Glascoe FP, Olson LM. 2004.

Assessing development in the pediatric office*, Pediatrics,* Vol. 113(6):1926–33 [↑](#endnote-ref-6)
7. Dworkin PH Detection of behavioral, developmental, and psychosocial problems in pediatric primary care practice. *Curr Opin Pediatr* 1993; 5:531-536 [[Medline]](http://aappolicy.aappublications.org/cgi/external_ref?access_num=7506962&link_type=MED) [↑](#endnote-ref-7)