



# A PEDIATRIC *Perspective*

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## **Developmental delay vs. developmental disorder in young children: Understanding the difference**

by **Kim McConnell, M.D.**

When a child fails to meet expected developmental milestones and there is no specific diagnosis or apparent explanation, there is a tendency to describe the child as being “developmentally delayed.” As a diagnostic label, however, this phrase has inherent shortcomings. Primary care practitioners have a key role in identifying children with developmental problems. This includes learning to recognize both delayed development and disordered development. A child who has developmental delay has slower than expected attainment of developmental milestones but progress occurs in the anticipated sequence. A child who has a disordered developmental profile has gaps or “scatter” in their attainment of developmental milestones. Progress occurs in a non-sequential pattern. Sometimes this is referred to as a “deviant” pattern of development. Adding to the confusion is the fact that a child with developmental disorder often has developmental delay as well.

The definition of what constitutes a developmental delay that is cause for concern varies somewhat depending on the particular assessment tool and its cut-off for passing the assessment criteria. Minnesota has adopted a definition of developmental delay to determine eligibility criteria for early intervention services. Primary practitioners can obtain more information about these criteria by contacting the early intervention team in the child’s school district. Another useful reference is an article by Richard Solomon, M.D., about the early intervention system for children from birth to age 3.<sup>1</sup>

A child with a disordered developmental pattern may first come to the attention of care providers when parents notice that a younger sibling has surpassed an older one in some areas. Yet, at the same time, the older child has successfully achieved some age-appropriate skills. This pattern offers evidence of gaps or scatter in the older child’s skills. Sometimes a child’s inability to perform certain tasks, while successfully completing others, is misinterpreted as noncompliance. As a result, the child may be at risk for punishment for not doing something that he actually cannot do or does not understand. Identifying disorder in a child’s developmental pattern is particularly important for the early identification of developmental language disorders and autistic spectrum disorders, and for distinguishing these conditions from others such as mental retardation.

### **Major developmental domains**

To distinguish a pattern of developmental disorder from developmental delay, it is important to look at the child’s development across all the major domains — even if the initial concern was about one domain only, such as slow speech development.

Each of the “streams” of development should be examined, including gross motor, fine motor and visuomotor problem-solving, expressive and receptive language, and social-adaptive behavior.<sup>2</sup> Progress in these domains is interrelated. Achievement of milestones in some areas, is dependent on progress in others.

For example, the early social smile of a 6-week-old baby has a communicative origin. Stanley Greenspan, M.D., notes that communication is the outward expression of emotion.<sup>3</sup> Interactive play skills require communication abilities and visuomotor problem solving skills. Language develops in the context of interpersonal relationships. While difficulties may arise in only one main developmental domain, often problems in multiple areas might be overlooked if the interrelatedness of various developmental skills is not recognized.

### **A speech delay or something more?**

Concern about speech delay in a preschool-aged child is a common problem encountered in the primary care setting. The differential diagnosis of speech and language delay includes hearing loss, developmental language disorders, autistic spectrum disorders and mental retardation. Accurate diagnosis is important because treatment strategies will be different, including the educational strategies that will benefit the child.

Careful questioning of parents and documentation of language milestones is helpful in early identification of significant problems. The progression from cooing, to babbling, to the use of specific words should be monitored. Yet, it is also important to note at what age a child begins to show understanding of spoken words — especially words not accompanied by gestures.

Sometimes when speech progress is surveyed, the main focus is on the number of spoken words in a child’s vocabulary. It is also critical, however, to ascertain whether a child can follow directions, if they are motivated to communicate with others, and if they can answer questions in an age-appropriate manner. Since many toddlers and preschool-aged children “clam-up” or cling to a parent in the clinic setting, the parent’s description of how the child uses language at home is crucial.

Signs of a disordered language pattern in preschool-aged children include:

- Limited speech and/or limited vocal imitation
- Difficulty with language comprehension — child is very reliant on situational or visual cues — child has difficulty answering questions
- Child is considered to be very independent (may have frequent temper tantrums) but has difficulty using language to get needs met
- Limited social interaction, difficulty in peer play, excessive shyness
- Echolalia

### **Early markers of autistic spectrum disorders**

Children with autistic spectrum disorders — including autism and pervasive developmental disorder not otherwise specified (PDD-NOS) — have difficulties in the areas of communication and social interaction. The child who presents with an initial concern about speech delay should be screened for difficulties in other aspects of language and for problems with social interactions. Deficits in several key areas have emerged as early warning signs of autism.

The Checklist for Autism in Toddlers, or CHAT, screens for autism prior to age 3. The checklist is designed for use as early as 18 months and consists of nine questions to ask the parent and five clinical observations. An adapted version containing fewer questions is also available. (fig. 1) The CHAT focuses on behaviors that are early markers of autism including deficits in pretend play, social interaction and joint attention.

Even if the primary care practitioner does not use CHAT, the following additional items could be included into the routine list of milestones that are tracked:

- Evidence of pretend play — using objects in some way other than for their intended purpose.
- Protodeclarative pointing — pointing out objects of interest to elicit a response from another person. (Children with deficits in joint attention generally do not point out or show objects to others. In video studies of children, very few of those diagnosed with PDD and none of those diagnosed with autism were seen showing an object to another child.)
- The use of gaze monitoring — the child looks at an object pointed out by an adult and then looks back to the adult. These skills are emerging by age 15 months and certainly should be present at 18 months.

Potential results of delayed or missed diagnosis Making accurate developmental diagnoses in young children is tricky! The range of what is “normal” is often broad and it may not be easy to determine if there is cause for concern. However, continued use of the term “developmentally delayed” to describe a child’s difficulties may lead to the expectation that the child will “catch up” when often, that is not the case.

A lack of recognition of the early signs of developmental disorder can also lead to misinterpretation of the child’s behavior, often causing negative ramifications for the family and child. The parents might believe that they are to blame for their child’s difficulties with communication and social development.

### Fig. 1 Modified CHAT checklist

#### Questions for the parent:

1. Does your child ever pretend, for example, to make a cup of tea using a toy cup and teapot or pretend other things?
2. Does your child ever use his or her index finger to point and indicate interest in something?
3. Does your child take an interest in other children?
4. Does your child enjoy playing peekaboo or hide-and-seek?
5. Does your child ever bring objects to you or show you something?

If the answer to two or more questions is “no” autism is suspected (except in the presence of severe generalized developmental delays).

#### Physician’s observations:

1. During the appointment, has the child made eye contact with you?
2. Get the child’s attention, then point across the room at an interesting object and say, “Oh look! There’s a [name of object].” Watch the child’s face. Does the child look across to see what you are pointing at?
3. Get the child’s attention, then give the child a miniature toy cup and teapot and say, “Can you make a cup of tea?” Does the child pretend to pour out the tea, drink it and so forth? (may use other objects for pretend play).
4. Ask the child, “Where’s the light?” or say, “Show me the light.” Does the child point with his or her index finger at the light?

If the answer to two or more of these questions is “no,” autism is suspected.

*From Baron-Cohen S, Allen J, and Gillberg C. Can autism be detected at 18 months? The needle, the haystack and the CHAT. British Journal of Psychiatry, 161:839-843, 1992. Adapted with permission by Batshaw ML, Editor. Children with disabilities. Baltimore: Brookes Publishing Co. 1997.*

Physician referral to an early intervention program for assessment will provide important information about the child's developmental abilities and eligibility for services. Consultation with a developmental pediatrician is also an appropriate step in the process of diagnosis and establishment of a plan of intervention. For more information or to refer a patient to Gillette Children's, please call (651) 229-3848 or 229-3944. To reach Gillette Children's West clinic in Minnetonka, please call (612) 936-0977.

1. Solomon R. *Pediatricians and Early Intervention: Everything you need to know but are too busy to ask. Infants and young children*, 75:38:51, 1995.
2. Capute AJ and Accardo PJ. *Developmental Disabilities in Infancy and Early Childhood*. Brookes Publishing Co., Baltimore, 1996.
3. Greenspan SI. *The emotional development of infants and young children. Pediatric Basics*, 63:9-16, 1993.