Age at Diagnosis of Autism Spectrum Disorders

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Early identification of autism has become a national priority but, despite efforts, there are children who are being identified at a later age. In this study, children of Hispanic and African American origin, foreign-born children, and children born to foreign mothers were more likely to be diagnosed later. *(J Pediatr 2012;161:554-6)*

The American Academy of Pediatrics has emphasized the importance of early identification of autism spectrum disorders (ASDs), and recommended close developmental observation at every well-child visit and screening for autism with a standardized instrument at 18 and 24 months of age.[1] Early identification of ASDs has become a national priority as studies have established that the impairments associated with ASDs can be ameliorated through intensive early targeted autism-specific services.[2,3]

Although experienced clinicians can reliably diagnose ASDs in children as young as 2 years old,[4] there are children who are being identified at a later age and are not able to access early interventions promptly.[5] Could these delayed diagnoses be examples of health disparities attributable to economic, racial/ethnic, language, or educational factors? Although ASD has been shown to affect individuals of all races and socioeconomic levels, little information is available regarding differences in the age at diagnosis based on the demographic characteristics of the child/family. Studies in the United States have suggested that despite efforts at early identification, autism is diagnosed later in African-American children than in Caucasian children.[6,7] African-American and Hispanic children with autism have poorer access to health care than White children,[8] and underserved populations are under-represented in web-based national registries (such as Interactive Autism Network and Autism Genetic Resource Exchange) as well as in special education programs.[9] The question remains about the age at diagnosis of Hispanic children and the effect of other demographic and clinical characteristics on their identification. This is an important issue to explore in order to create targeted interventions that can decrease the gap between the age at which children with ASDs can be identified and the age at which they are diagnosed.

Methods

We examined the age at initial diagnosis of ASD in all children, ages 1-6 years, diagnosed with ASDs from 2003-2010 in a university affiliated developmental center that serves an ethnically diverse population. The Children's Evaluation and Rehabilitation Center (CERC) of the Rose F. Kennedy Center, Albert Einstein College of Medicine serves as a major clinical resource to the local Bronx community and a tertiary care resource to the greater tri-state area. CERC is located in the Bronx, which has a substantial Hispanic population. With a per capita income of $23 004 in 2004 and 41% of households that are below the poverty line, the Bronx clearly has a large number of poor residents.[10] The demographics of the population seen at CERC are roughly 45% Hispanic, 30% African-American, 20% Caucasian, and 5% other.

Referrals to the Center come from parents, pediatricians, early intervention officials, and/or foster care agencies. Children evaluated at CERC have a systematic monolingual or bilingual multidisciplinary evaluation involving a developmental pediatrician, psychologist, speech pathologist, and education specialist. The diagnosis of ASD is based on the *Diagnostic and Statistical Manual of Mental Disorders-IV* criteria[11] confirmed with the Childhood Autism Rating Scale (CARS),[12] and if there are still questions about diagnosis, the Autism Diagnostic Observation Schedule[13] is scheduled and performed promptly.

Information reviewed included demographic and clinical characteristics. Demographics included the age of the child at evaluation, sex, self-described ethnic group, language spoken in the home/bilingual household, level of maternal education, child and mother country of origin, maternal age, and use of private medical insurance coverage vs Medicaid. Clinical characteristics included presence of language regression, mannerisms such as toe walking,[14,15] whether the child was the first offspring, developmental/cognitive level, scores from the CARS, and a family history of autism, developmental disabilities, or psychiatric disorders.

Results

We identified 473 children, ages 1-6 years, who received a diagnosis of ASD; 74 (16%) came to CERC with a previous

ASD	Autism spectrum disorder
CARS	Childhood Autism Rating Scale
CERC	Children's Evaluation and Rehabilitation Center

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