

# More kids with autism evaluated as preschoolers—but more progress needed in early recognition

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An increasing proportion of children with autism spectrum disorders (ASD) are undergoing recommended evaluation in the preschool years—but population rates of ASD remain higher in eight-year-olds compared to four-year-olds, reports a study in the *Journal of Developmental & Behavioral Pediatrics*, the official journal of the Society for Developmental and Behavioral Pediatrics.

Based on nationwide monitoring data, the study "offers valuable insight into the early identification of ASD and suggests some progression towards lowering the age of first evaluation in participating communities," write Dr. Daisy Christensen of the National Center on Birth Defects and Developmental Disabilities and colleagues.

## New Insights on Rates and Characteristics of Preschoolers with ASD

The study used 2010 data from five of eleven US sites participating in the Centers for Disease Control and Prevention's [Autism and Developmental Disabilities Monitoring \(ADDM\) Network](#). The prevalence of ASD was assessed by screening and review of the [children](#)'s health and/or education records. Population rates of ASD among four-year-olds (born in 2006) were compared with those in eight-year-olds (born in 2002) in the same areas.

In the overall population of nearly 58,500 four-year-olds, the estimated prevalence of ASD was 13.4 per 1,000 children. That figure varied substantially across sites: from 8.5 per 1,000 in Missouri to 19.7 per 1,000 in New Jersey.

Estimates of ASD prevalence were about 30 percent lower in four-year-olds compared to eight-year-olds, suggesting that many cases aren't being recognized until after school age—especially ASD without cognitive (intellectual) impairment. Eight-year-old children had a 40 percent higher prevalence of ASD without cognitive impairment compared to four-year-old children. The reverse was true for ASD plus cognitive impairment: four-year-olds had a 20 percent higher prevalence compared to eight-year-olds.

In a promising trend, more children with autism received their first comprehensive evaluation at a younger age. In comparable groups of children diagnosed with autism by age four, the median age at initial evaluation was 27 months for children born in 2006 versus 32 months for those born in 2002. Increasing the percentage of children with ASD who undergo comprehensive evaluation before 36 months is a major part of efforts to improve recognition and management of these disorders.

There was some evidence of racial/ethnic disparities—among four-year-olds, rates of early evaluation were lower in black children than in white children. However, this discrepancy was smaller among children with ASD plus [cognitive impairment](#). Boys were less likely to have early evaluation than girls

Estimates of ASD prevalence were consistently higher at sites where both education and health records were available. That highlights the important role of the special education system in identifying preschoolers with developmental disorders.

Reported rates of ASD have risen markedly in recent decades, whether because of increased risk and/or increased recognition and diagnosis. Since 2000, the ADDM Network has performed records-based surveillance for ASD and other developmental disabilities.

"While ASD is considered a lifelong condition, evidence suggests that early intervention can improve outcomes," Dr. Christensen and coauthors write. Early identification and access to special services can improve outcomes for children with ASD.

The new findings suggest progress toward that goal, with more children with ASD receiving recommended comprehensive evaluation by age 36 months. But estimates of ASD prevalence remain consistently lower in four-year-olds compared to eight-year-olds, suggesting that more cases will be recognized as the children reach school age.

"Continued efforts should be made to promote early identification of children with ASD so that interventions can be initiated at the youngest age possible," Dr. Christensen and colleagues conclude. They plan further follow-up to assess trends in ASD prevalence and characteristics for children in differing age groups.

**More information:** Deborah L. Christensen et al. Prevalence and Characteristics of Autism Spectrum Disorder Among 4-Year-Old Children in the Autism and Developmental Disabilities Monitoring Network, *Journal of Developmental & Behavioral Pediatrics* (2015). [DOI: 10.1097/DBP.0000000000000235](https://doi.org/10.1097/DBP.0000000000000235)

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