

NEWS

Autism rates among preschoolers signal gaps in detection

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The rate of autism among 4-year-olds is lower than that among 8-year-olds, suggesting that many children go undiagnosed until they start school. New data from the U.S. Centers for Disease Control and Prevention (CDC) put the **prevalence** of autism among these younger children at 1 in 75¹.

The findings, published 9 December in the *Journal of Developmental & Behavioral Pediatrics*, are the first fruits of a national effort to estimate autism prevalence among young children. There is good evidence that **early intervention boosts social and language skills**, yet existing autism prevalence data pertain to older children, says CDC epidemiologist Deborah Christensen, who led the new study.

"We wanted to be able to provide more timely information to communities and stakeholders to help with efforts to improve early identification," Christensen says.

The American Academy of Pediatrics **recommends routine autism screening** at 18 and 24 months. Yet an independent, volunteer panel of medical experts called the U.S. Preventive Services Task Force advocates otherwise. Last August, it released a **draft decision** stating that there was **insufficient evidence to support universal screening** for children under the age of 3.

The new study supports the idea that systematic early screening for autism can be beneficial, says **Diana Robins**, associate professor at the A.J. Drexel Autism Institute in Philadelphia, who was not involved in the study.

"Many cases of autism should be detected by age 2, and the fact that there are a good number of kids who aren't diagnosed even by age 4 suggests that we can do better," says Robins, who helped to develop the **Modified Checklist for Autism in Toddlers** (M-CHAT), a screening test for autism for children as young as 16 months.

Detection dissonance:

The researchers examined school and medical records from 9,232 4-year-old children who were in special education classes or had autism-related diagnoses. They focused on children living in Arizona, Missouri, New Jersey, Utah and Wisconsin in 2010.

The team flagged records listing autism diagnoses or key words such as ‘eye contact’ and ‘joint attention’ for further review by clinicians, who scrutinized the records to determine whether the children met the criteria for autism.

The researchers used data from a previous CDC study to examine 21,526 8-year-olds’ records and estimate the prevalence of autism among children at that age living in the same areas. They found that about 1 in 52 children have autism at age 8, a prevalence roughly 44 percent higher than that among preschoolers.

The mismatch in rates suggests that many children with autism go undetected until they start school. Christensen says children who are diagnosed earlier may have more severe symptoms that are easier to spot. She and her colleagues found that cognitive impairment is more common among 4-year-olds than 8-year-olds with autism.

They also found that the gender gap is smaller in the younger children. Autism affects 3 boys for every girl among 4-year-olds, compared with a 4-to-1 ratio among the 8-year-olds.

Higher rates of cognitive deficits among the 4-year-olds could also explain this discrepancy, Christensen says. **Girls with autism are often missed**, and severe impairments may help them stand out.

Earlier evaluations:

Despite these gaps in early detection, clinicians are becoming more diligent about following children who show developmental red flags. A larger fraction of 4-year-olds than 8-year-olds received their first evaluation for developmental delays by age 3. And the median age for these comprehensive evaluations dropped to 27 months among the younger group, compared with 32 months for the older group.

Earlier testing may allow a child to receive interventions before behavioral issues become entrenched, says **Rebecca Landa**, director of the Center for Autism and Related Disorders at the Kennedy Krieger Institute in Baltimore, who was not involved in the study. Cutting wait times for a developmental assessment may also lessen the stress on worried parents.

Christensen and her team next aim to identify specific populations of preschoolers that are lagging in early detection. They also plan to follow the 4-year-olds from the current study until age 8 to see

if the rate of autism among them changes.

REFERENCES:

1. Christensen D.L. *et al. J. Dev. Behav. Pediatr.* **37**, 1-8 (2016) [PubMed](#)