CDC Releases New Data on Autism Spectrum Disorders (ASDs) from Multiple Communities in the United States;  
Majority of Children with ASDs in the Areas Studied had Developmental Concerns Before Age Three

The Centers for Disease Control and Prevention (CDC) reported findings today from the first and largest summary of prevalence data from multiple U.S. communities participating in an autism spectrum disorder (ASD) surveillance project. The results showed an average of 6.7 children out of 1,000 had an ASD in the six communities assessed in 2000, and an average of 6.6 children out of 1,000 having an ASD in the 14 communities included in the 2002 study. All children in the studies were eight years old because previous research has shown that most children with an ASD have been identified by this age for services.

For decades, the best estimate for the prevalence of autism was four to five per 10,000 children. More recent studies from multiple countries using current diagnostic criteria conducted with different methods have indicated that there is a range of ASD prevalence between 1 in 500 children and 1 in 166 children. The CDC studies provide information on the occurrence of ASDs in fourteen communities in the United States.

“Our estimates are becoming better and more consistent, though we can’t yet tell if there is a true increase in ASDs or if the changes are the result of our better studies,” said CDC Director Dr. Julie Gerberding. “We do know, however, that these disorders are affecting too many children.”

Overall, the 2000 study found ASD rates ranged from one in 222 children to one in 101 eight-year old children in the six communities studied. The 2002 study found ASD rates ranging from one in 303 to one in 94 among eight-year old children. The average finding of 6.6 and 6.7 per 1,000 eight-year-olds translates to approximately one in 150 children in these communities. This is consistent with the upper end of prevalence estimates from previously published studies, with some of the communities having an estimate higher than those previously reported in U.S. studies.

ASDs are developmental disabilities and are defined by considerable impairments in social interaction and communication and the presence of unusual behaviors and
interests. They can be diagnosed as early as 18 months and last throughout a person’s life. ASDs include autistic disorder, pervasive developmental disorder – not otherwise specified (PDD-NOS, including atypical autism), and Asperger syndrome.

The 2000 study included approximately 4.5 percent of U.S. eight-year-old children born in 1992 from six states - Arizona, Georgia, Maryland, New Jersey, South Carolina and West Virginia. A total of 1,252 eight-year olds were identified as having an ASD.

The 2002 study included approximately 10 percent of U.S. eight-year-old children born in 1994 from 14 states - Alabama, Arizona, Arkansas, Colorado, Georgia, Maryland, Missouri, New Jersey, North Carolina, Pennsylvania, South Carolina, Utah, West Virginia and Wisconsin. A total of 2,685 eight-year-olds were identified as having an ASD.

“It is extremely difficult to accurately estimate the number of children who have an ASD,” said Dr. Marshalyn Yeargin-Allsopp, chief of CDC’s autism program. “Medical records often do not provide such information, and identification is often made by schools or education specialists. The data reported today by the Autism and Development Disabilities Monitoring (ADDM) Network was designed to provide more consistent and reliable estimates.”

“It’s important to note that these studies don’t provide a national estimate, but that they do confirm that ASDs in the areas surveyed are more common in these communities studied than previously thought,” said Yeargin-Allsopp. “We need to continue efforts to monitor the prevalence of ASDs and to improve our understanding of these disorders. Good estimates of how many children in a community may have an ASD will also help school and health officials in their planning and intervention efforts.”

The purpose of CDC’s ADDM project was to develop a system for better understanding the size and characteristics of the population of children with an ASD.

In addition to trying to measure the number of children with an ASD, the studies also looked at when parents and others first noted signs of developmental concerns in their children. The 2000 and 2002 studies found 51 percent to 88 percent of children with ASDs had documented developmental concerns before the age of three. Half of the children were diagnosed with an ASD when they were between four and one half and five and one half years old. The most commonly documented concerns were in language development, followed by social development.
“We don’t know the causes of ASDs, but we do know that if we can identify autism and other developmental problems in children early, they can begin receiving appropriate interventions sooner,” said Yeargin-Allsopp. “It is important for parents, health care professionals and childcare providers to recognize developmental milestones such as smiling, pointing and waving bye-bye. It’s also important that health care professionals give children routine developmental and autism-specific screenings.”

While these studies did not investigate the causes of ASDs, CDC’s Centers for Autism and Development Disabilities Research and Epidemiology (CADDRE) Network is doing a multi-state study to help identify factors that may put children at risk for ASDs and other developmental disabilities.

This project is being conducted by CDC, University of Alabama at Birmingham, University of Arizona at Tucson, University of Arkansas, Colorado Department of Public Health and Environment, Johns Hopkins University, Washington University in St. Louis, University of North Carolina at Chapel Hill, University of Medicine and Dentistry of New Jersey in Newark, University of Pennsylvania School of Nursing, Medical University of South Carolina, University of Utah, Marshall University and the University of Wisconsin-Madison. Six sites participated in the 2000 project, and an additional eight were added for the 2002 project.

CDC also has a public awareness campaign titled, “Learn the Signs. Act Early” designed to increase the awareness of child development by educating parents, health care professionals and childcare providers on the importance of tracking a child’s social and emotional development, including the potential early warning signs of autism and other developmental disabilities. To learn more about the “Learn the Signs. Act Early,” visit www.cdc.gov/actearly.

For more information on CDC’s work on autism, please visit www.cdc.gov/autism.

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