

Signs of Progress: Data Suggest Racial Gap for ASD Diagnosis is Closing

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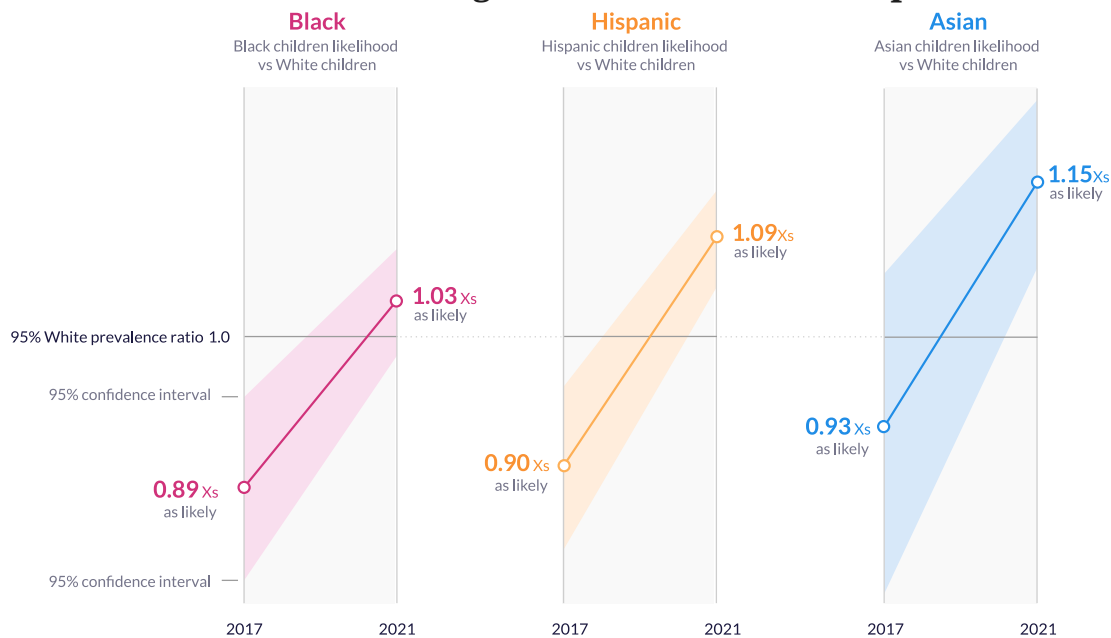
Abstract: Racial disparities in rates of autism spectrum disorder (ASD) diagnosis have largely disappeared.

A large body of previous research has demonstrated racial gaps in autism diagnosis, with White children diagnosed with autism spectrum disorder (ASD) earlier and more often than children in other racial and ethnic groups^{1,2}. More recent analyses, such as those by the CDC, have found that those gaps are declining³. In our analysis, we found further evidence that efforts to reach parity across rates of diagnosis and age of diagnosis have been successful as those differences are declining across all racial groups.

To evaluate racial differences in the likelihood of diagnosis and align with the CDC analyses⁴, we evaluated the prevalence of ASD by race in children who were exactly 8 years old at some point in the study year. In 2017, 2.2% (260/11,835) Asian children, 2.1% (1,076/51,470) Black children, 2.1% (1,311/61,718) Hispanic children, and 2.4% (3,886/164,728) of White children were diagnosed with ASD. In 2021, 4.7% (632/13,499) Asian children, 4.2% (2,324/55,671) of Black children, 4.4% (2,781/62,815) of Hispanic children, and 4.0% (6,778/167,579) of White children were diagnosed with ASD.

Figure 1 shows how likely children of other races were to be diagnosed with autism as compared to White children in 2017 and 2021. For example, Black children were about 11% less likely than White children to be diagnosed with autism in 2017. However, by 2021, Black children were about 3% more likely than White children to be diagnosed with ASD.

Prevalence Ratios of ASD Diagnosis Across Racial Groups



"Prevalence Ratios of ASD Diagnosis Across Racial Groups," 2022. EpicResearch.org

Figure 1: Prevalence of ASD diagnoses compared to White children by race. From 2017 to 2021, all racial groups we examined neared or passed parity with White children in the likelihood of receiving an autism diagnosis.

We separately assessed the median age at diagnosis across racial groups by evaluating children between 8 and 17 years old to determine when they were first diagnosed with ASD. We didn't include younger children because ASD often isn't diagnosed until later in childhood, and we wanted to make sure that our analysis focused on children likely to have already received a diagnosis.

We found that the age of diagnosis was consistent across racial groups when adjusted for age differences across the underlying population. By the end of the study period, all groups had a median age at diagnosis between 4.4 and 4.9 years, with Asian children having the youngest median age at diagnosis and White children having the oldest median age.

Our analysis found that racial disparities in the identification and diagnosis of ASD have decreased, and ASD diagnosis has become slightly more likely in non-White children in our sample. Experts have suggested that this change might be due to more effective outreach across racial groups and increased efforts to improve autism screening for all children, such as the CDC's Learn the Signs. Act Early. program.⁴ Our findings suggest that states and communities should continue to follow targeted strategies to promote racial equity in awareness and identification of ASD.

These data come from Cosmos, a HIPAA-defined Limited Data Set of more than 126 million patients from 141 Epic organizations including 832 hospitals and 13,421 clinics, serving patients in all 50 states. The Cosmos population closely aligns with U.S. Census Bureau metrics for race and ethnicity. This study was completed in collaboration with the [Institute for Exceptional Care](#).

References

1. Fountain C, King MD, Bearman PS. Age of diagnosis for autism: individual and community factors across 10 birth cohorts. *J Epidemiol Community Health*. 2011 Jun; 65(6): 503–510. doi: <https://jech.bmj.com/content/65/6/503.long>
2. Mandell DS, Listerud J, Levy SE, Pinto-Martin JA. Race differences in the age at diagnosis among Medicaid-eligible children with autism. *J Am Acad Child Adolesc Psychiatry*. 2002 Dec;41(12):1447-53. doi: 10.1097/00004583-200212000-00016.
3. The Centers for Disease Control and Prevention. Spotlight On: Racial and Ethnic Differences in Children Identified with Autism Spectrum Disorder (ASD). <https://www.cdc.gov/ncbddd/autism/addm-community-report/differences-in-children.html>. Accessed on February 4, 2022.
4. The Centers for Disease Control and Prevention. Autism Spectrum Disorder: 2021 Community Report: Data for Action. <https://www.cdc.gov/ncbddd/autism/addm-community-report/data-for-action.html>. Accessed on March 7, 2022.

Data Definitions

Term	Definition
Autism Spectrum Disorder	ICD-10-CM codes F84.0, F84.1, F84.2, F84.3, F84.4, F84.5, F84.8, F84.9
Study Period	1/1/2017 to 12/31/2021