

# Spotlight on Autism in New Jersey: Trends and Disparities in Autism Prevalence

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# 1. ASD is a prevalent disorder

- 3.1% of 8-year-olds in New Jersey<sup>1</sup> (2020)
- 5.0% Ocean County, New Jersey<sup>2</sup> (2022)
- 4.4% Newark, New Jersey<sup>2</sup>
- 7.0% Toms River, New Jersey<sup>2</sup>
  
- 4.5% 8-year-olds in San Diego, CA<sup>12</sup> (2023)

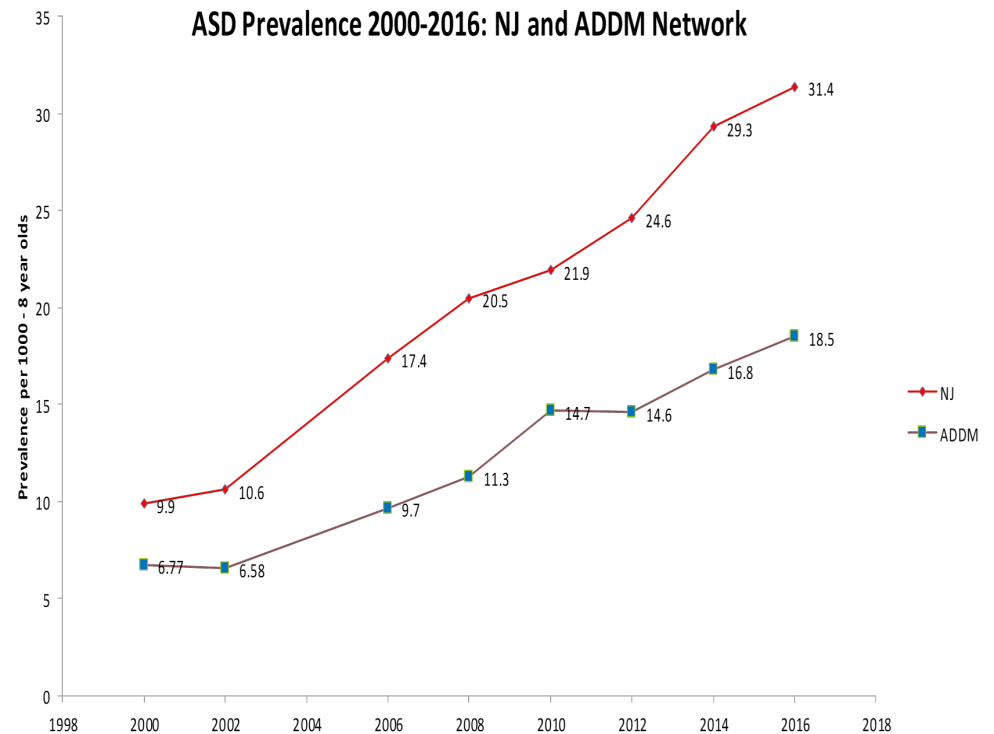
2. ASD has increased significantly
3. New Jersey is a leading indicator

0.1-0.2% - pre 1990 estimates

0.6% - Brick Township<sup>3</sup>

0.6% - ADDM Network<sup>4</sup>

0.9% - NJ<sup>4</sup>



## 4. Undiagnosed

- The rate of ASD diagnosis increased from 62% to 88%<sup>5</sup>
- However, most recently, 22% of (NJ) **8-year-old** surveillance-identified cases, did not have an ASD diagnosis<sup>1</sup>
- Among **16-year-old** (NJ) surveillance-identified cases 25% did not have an ASD diagnosis<sup>6</sup>

## 5. Disparities in Identification & Treatment Persist

- Minority children and girls with ASD are more likely to be undiagnosed or misdiagnosed<sup>5,7</sup>
- Minority and low-SES children are less likely to:
  - Come to professional attention before 36 months<sup>2</sup>
  - Receive Early Intervention Program (EIP) services<sup>8</sup>
  - Be diagnosed before 48 months<sup>2</sup>

## 6. The wealth gradient in ASD has shifted

- NJ and ADDM cohorts from 2000-2010 showed a strong positive association between socioeconomic status (SES) and ASD prevalence<sup>9,10,11</sup>
- Now, NJ and ADDM show that low+mid-SES communities have highest rates of ASD prevalence<sup>2, 12</sup>
- Fastest acceleration -- Hispanic children, starting with 2012 (birth year)<sup>13</sup>

## 6. Adolescents -- underappreciated<sup>6</sup>

- 59% have a co-occurring neuropsychiatric disorder (NP)
- 35% have intellectual disability (ID)
- 1-in-4 satisfy ASD criteria, but don't have ASD diagnosis
- Prevalence higher in high-SES (25.6/1,000) vs low-SES (12.6/1,000)
- Black & Hispanic children more ID  
White children more more NP
- Estimates at 8 and 16-years -- almost identical, indicating stability with slight shift toward lower impairment at 16-years

# Projections.....Predictions

- ASD prevalence estimates for 2022 will be higher
- Greatest increases in prevalence will be in minority and low-SES communities
- Wealth and race-based disparities in detection and intervention will be observed
- The next report will not reflect public health concern, propose understanding ASD risk factors or advance early detection. Most likely, the next report will mention better awareness and recognition as possible factors bearing on higher estimates.



# Recommendations

- Identify ASD risk factors and triggers
- Promote universal ASD screening of toddlers and pre-schoolers
- Provide appropriate resources for care, services, planning
- Implement population-based studies of adults with ASD

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# References

1. Maenner MJ, Warren Z, Robinson Williams A, et al. Prevalence and Characteristics of Autism Spectrum Disorder Among Children Aged 8 Years - Autism and Developmental Disabilities Monitoring Network, 11 Sites, United States, 2020. *MMWR Surveill Summ.* 2020;69(2):1-12.
2. Shenouda J, Barrett E, Davidow A, Halperin W, Silenzio V, Zahorodny W. Prevalence of Autism Spectrum Disorder in a Large, Diverse Metropolitan Area: Variation by Sociodemographic Factors. *Autism Research* 15 (1): 146-155, 2022
3. Bertrand J, Mars A, Boyle C, Bove F, Yeargin-Allsopp M, Decoufle P. Prevalence of autism in a United States population: the Brick Township, New Jersey, investigation. *Pediatrics*, 108(5), 1155–1161. 2001
4. ADDM Network. Prevalence of the Autism Spectrum Disorders -- Autism and Developmental Disabilities Monitoring Network, Six Sites, United States, 2000. *MMWR* 56: 1-11, 2007
5. Lillian A, Shenouda J, Sidwell K, Zahorodny W. Change in Prevalence and Disparities in the ASD Diagnostic Rate. *Pediatric Academic Societies Meeting*, Toronto, Canada, 2024
6. Zahorodny W, Shenouda J, Sidwell K, Verile M, Cruz Alvarez C, Fusco A, Mars A, Waale M, Gleeson T, Burack G, Zumoff P. Prevalence and Characteristics of Adolescents with Autism Spectrum Disorder in the New York-New Jersey Metropolitan Area. *JADD*, online August 29, 2023
7. Wiggins L, Durkin M, Esler A, Lee L, Zahorodny W, Rice, C, Yeargin-Allsopp M, Hall-Linde J, Moriarty M, Christensen J, Shenouda J, Baio J. Disparities in documented diagnoses of Autism Spectrum Disorder based on demographic, individual and service factors. *Autism Research* 13 (3) 464-473, 2020
8. Shenouda J, Barrett E, Davidow A, Halperin W, Silenzio V, Zahorodny W. Disparities in Early Intervention Program participation by children with Autism Spectrum Disorder in a US Metropolitan Area: 2006-2016. *JAMA Pediatrics* 176 (9): 906-914, 2022
9. Thomas P, Zahorodny W, Kim S., Jani N, Halperin W, Brimacombe M. The Association of Autism Diagnosis with Socioeconomic Status; *Autism*, 16(2): 201-213, 2012
10. Durkin MS, Maenner MJ, Meaney F J, Levy SE, DiGuiseppi C, Nicholas JS, Kirby RS, Pinto-Martin JA, Schieve LA. Socioeconomic inequality in the prevalence of autism spectrum disorder: evidence from a U.S. cross-sectional study. *PloS one*, 5(7), e11551, 2010
11. Durkin MS, Maenner MJ, Baio J, Christensen D, Daniels J, Fitzgerald R, Imm P, Lee LC, Schieve LA, Van Naarden Braun K, Wingate MS, Yeargin-Allsopp M. Autism Spectrum Disorder Among US Children (2002-2010): Socioeconomic, Racial, and Ethnic Disparities. *American journal of public health*, 107(11), 1818–1826, 2017

Thank you!

Your comments & questions are welcome

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