

## Data collection and methodology

Health Analytics at the Georgia Institute of Technology collected the reported diagnoses of Autism Spectrum Disorder (ASD) and the total Medicaid population of children 8 years old and younger in 2009 using data provided by the Center for Medicare and Medicaid Services (CMS). The number of ASD diagnoses was collected using the International Statistical Classification of Diseases and Related Health Problems, also known as ICD-9 codes. Unduplicated counts of any child with a primary or secondary autism-specific ICD-9 code were included in our data. Counties that had 10 or fewer reported diagnoses were included in our aggregate, state level numbers but were not provided at the county level given that this data could potentially be identifiable. This restriction is in accordance with Georgia Tech's data use agreement with CMS.

The estimated number of children with ASD was calculated using the CDC's prevalence estimate for Georgia, 1 in 64, and the number of children on Medicaid in each county. The following equation illustrates our calculation:

$$P = \frac{1}{64} \times C$$

$P$  = the estimated number of children with ASD by county

$C$  = the number of children in a county age 8 and under on Medicaid

After calculating the estimated number of children with ASD by county, we compared that to the reported diagnoses provided by the Medicaid data to estimate the number of children that potentially go undiagnosed. The number of potentially undiagnosed children was calculated by subtracting the estimated prevalence and the reported diagnoses from Medicaid. For counties with 10 or less diagnoses, we assumed the diagnosis number to be 10. This yields conservative estimates for potential underdiagnoses.

*It is important to emphasize that the data shown in the prevalence visualization on the website, [www.autism.gatech.edu](http://www.autism.gatech.edu), reflects Medicaid data from 2009 and does not represent the total population of children in each county.*