

# Unveiling the autism epidemic

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## EDITORIAL

Over the past 40 years, Autism Spectrum Disorder (ASD) has experienced a significant spike in diagnostic prevalence. In a 2012 survey of eight year olds in the United States 1 in 68 tested positive for ASD, compared to 1 in 2778 children aged 8-12 in a 1980 survey (1). The question arises: are more children developing autism, or is there simply an increase in diagnosis and diagnostic criteria?

A significant factor in the increases in diagnoses can be attributed to public awareness of autism. In the recent decades, increased funding for research and inclusion of ASD in individualized education by the Individuals with Disabilities Education Act (IDEA) has increased public awareness for autism and influenced parents to have their children screened. Through the disabilities act, schools are required to offer comprehensive evaluation for ASD, which increases the avenue for diagnosis beyond just health care providers (2). Families are also encouraged to test their children at younger ages in order to get them specialized help as early developmentally, as possible. Regions in which autism aid is more readily available tend to offer higher rates of autism screening and find higher incidence as compared to regions that offer less aid or assistance.

Furthermore, genetic studies of autism show that the likelihood of a child testing positive for autism is increased when a sibling has already been diagnosed with ASD (3-5). Because of this, autism cases are identified earlier within families with already diagnosed children, contributing to the increased prevalence. This may also be related to genetic and epigenetic causes that are increasingly being recognized as causative, especially with recent advances in testing such as whole exome sequencing (6).

Diagnostic advances and a broadening of the operational definition of autism has changed within the past decades, potentially contributing to this change in prevalence. The standards a child has to meet to be considered autistic has widened, most significantly on the mild criteria (2). Additionally, the broad range of symptoms and lack of concrete biological markers previously limited diagnosis to the most severe cases. A 2005 study looked at data from the California Department of Developmental Services and accredited 26.4% of the increase in Autism cases to changes in diagnostic processes and accretion (7). Disparity between autism caseloads in studies across the United States support the claim that much of the increased prevalence is due to diagnosis variations. Another study done in Australia showed similar findings (8).

It has been claimed that vaccines, especially mercury-containing vaccines, contribute to this rise in prevalence. However, there is no factual evidence to support this claim. Clearly, vaccinations reduce childhood morbidity and mortality, and thus vaccinations should not be withheld due to fear of linkage to autism (9).

What is clear is that children should be routinely screened for ASD, since

early identification and treatment can improve outcome (10,11). It is likely that the true prevalence of autism is still underestimated, given that many children with mild autism may be missed or diagnosed late. Additionally, compliance by primary care doctors in screening for autism at well child checks is still not at 100% (12).

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