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UK Autism Rates Plateau While US Rates Continue to Climb

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Although annual incidence rates of autism diagnoses increased dramatically during the 1990s in the United Kingdom, these rates "reached a plateau" by the beginning of the 2000s and have remained steady, new research suggests.

A population study of almost 2 million children in the UK who were 8 years old between 2004 and 2010 showed that yearly prevalence rates during this period stayed steady at approximately 3.8 per 1000 boys and 0.8 per 1000 girls.

In addition, incidence rates for UK children stayed around 1.2 per 1000 boys and 0.2 per 1000 girls each year of the study period.

"The attention to autism was modest in the 1990s at a time when the diagnosis rate was going off the chart. After 2000, the public and media attention went up dramatically in both the US and the UK — but our well-documented UK data indicate that there's been no change in the rate of diagnosis there in the 2000s," Hershel Jick, MD, associate professor of medicine at Boston University School of Medicine in Massachusetts, told *Medscape Medical News*.

The investigative team, consisting of researchers from both the United States and the UK, note that these findings differ significantly from a report released in 2012 by the US Centers for Disease Control and Prevention (CDC) showing that the prevalence rates of autism in American 8-year-olds increased 78% between 2004 and 2008, to a 2008 rate of 1 in 88 children.

"This...suggested a continuation of the dramatic increase in children diagnosed as autistic, which occurred in the 1990s," they write but add that whether the prevalence rates actually increased in the US "remains uncertain."

"This becomes a matter of how you diagnose and who does the diagnosis of autism in each country. And that becomes a matter of controversy, of which there is no obvious explanation, at least to us," said Dr. Jick.

The study was [published online](#) October 16 in *BMJ Open*.

CDC Comparison

The investigators note that the CDC's press release last year prompted them to examine information in the UK General Practice Research Database (GPRD) to compare prevalence rates.

"For direct comparison with the CDC study, we restricted our results to 8-year-old children," they write.

The researchers also sought to examine incidence rates.

The GPRD is a collaborative database created by the Boston Collaborative Drug Surveillance Program, Vamp Health, and a UK general practitioner. By 1996, the database had enrolled 1000 general practitioners from 300 practices.

"The nature of the database is that it is continually recording medical, clinical, and office information," said Dr. Jick.

Study results showed that the prevalence rate of autism in boys was about 3.8 per 1000 every year from 2004 to 2010, whereas the annual incidence rates were about 1.2 per 1000.

Incident rates per 1000 for each of the years between 2004 and 2010 were 1.18, 1.17, 1.29, 1.21, 1.22, 1.30, and 1.02, respectively.

The annual prevalence and incidence rates of autism in the girls were approximately 0.8 per 1000 and 0.2 per 1000, respectively.

Their incidence rates per 1000 for each of the years studied were 0.20, 0.22, 0.25, 0.31, 0.21, 0.23, and 0.21, respectively.

"Girls were about one-fifth as likely to be diagnosed as boys," write the investigators.

Cause Remains a Mystery

In a previous study that assessed the GPRD, the researchers found that "the cumulative incidence of autism in children born from 1988 to 1995 began to rise from a low level by more than fivefold during these years."

"The present study demonstrates that the annual incidence then levelled off and reached a steady state in children born from 1996 to 2001," they write.

The investigators add that dramatic increases in autism diagnoses during the earlier period were also found in the US and in Denmark.

However, they note that the controversial, and [now debunked](#), study published in 1998 by Andrew Wakefield suggesting a possible link between a "new syndrome" of autism and the childhood measles-mumps-rubella (MMR) vaccine did not play a role.

"While the MMR vaccine was surely not the cause of the dramatic rise in the 1990s, the actual cause remains in large part a mystery," write the investigators.

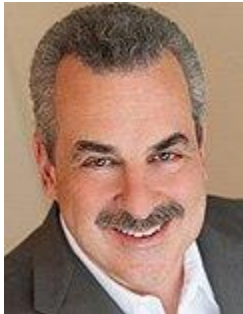
Still, they speculate that the increase may have been caused in part by "changing and broadening diagnostic criteria to include a spectrum of disorders, as well as social influences, including increased general medical and public awareness."

They add that current differences in prevalence rates in the US and the UK are "closely similar" to the reported rate differences between the countries for diagnosis and treatment of attention-deficit/hyperactivity disorder (ADHD).

"There are conditions like ADHD that are diagnosed 4 times as often in the US as in the UK. And there are other aspects of medical care in the US that are quite different, particularly drug usage and cost," added Dr. Jick.

Devil in the Details

"I think we need to understand that the way that we do surveillance, or the ways that we check new cases of autism or prevalence rates, is the most important issue at hand," Harold S. Koplewicz, MD, a child and adolescent psychiatrist and president of the Child Mind Institute in New York City, told *Medscape Medical News*.



Dr. Harold Koplewicz

Dr. Koplewicz, who was not involved with this research, noted that surveillance in Great Britain is based on chart reviews "and what clinicians are writing down on their charts about 8-year-old boys and girls that they see." And this is the same type of technique used in the US.

"But it's in the details where the devil lies. We have to be careful with comparing this study and the one from the CDC because it turns out we're probably not comparing apples and apples but apples and oranges," he said.

He explained that if pediatricians do not use the same type of symptom checklist or are not looking carefully for the symptoms of autism spectrum disorder, information about a new or existing case of autism will not be entered into the charts.

"And if the clinician is highly attuned to looking for these symptoms, that may explain why there is an exaggerated rate of illness that you didn't see before," said Dr. Koplewicz.

"The most important issue is, how did we see this dramatic increase [in the US] over the past 2 decades? And I think it's that we changed the nomenclature from autism to autism spectrum disorder," he said.

"As soon as you make it a spectrum, then there becomes mild, moderate, or severe symptoms that all come under the tent. And as soon as you make it more inclusive, you are going to see more cases."

Vaccines Not the Problem

Dr. Koplewicz agreed with the researchers that any increase in diagnosis is not due to the MMR vaccine.

"When parents hear that there's an increase, they want to try and find some explanation, and unfortunately, vaccines became a terrible scapegoat. The data was faulty that accused vaccines, and now we see kids dying from illnesses they didn't need to," he said.

"I think it's the role of every doctor to also be an educator. Parents need to be as informed as possible, and I would give them the facts. First, autism is still a rare illness. And number 2, there is no evidence that immunizations cause or increase the risk of autism."

He added that it is important to also explain that clinicians are now more vigilant and more aware of the disorder, and are asking more questions.

"In the past, pediatricians might not have been alarmed about a child that wasn't speaking by 3 years of age. But today, they are being more careful about looking at language and speech and social interaction. And it would be better to err on the side of caution."

The study authors and Dr. Koplewicz have disclosed no relevant financial relationships.

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