

# Analysis of more than 82,000 autistic children's health care usage data finds disparities

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A new analysis of data collected from more than 82,000 autistic children across seven years reveals significant differences in their health care

utilization according to sex, race and ethnicity.

Results of the study led by Assistant Professor Amber Angell and its implications were recently published online in *Research in Autism Spectrum Disorders*.

Previous research has shown that [autistic children](#) and youth utilize health care services more often than both the general pediatric population, as well as pediatric populations who have special health needs. However, few studies have examined health care utilization disparities across subgroups, such as the utilization rates of autistic males versus females, or across racial and [ethnic groups](#).

Angell and colleagues extracted data from the OneFlorida Data Trust, a research database managed by the University of Florida that collects information from 22 hospitals and more than 1,200 health care practices and clinics in the Sunshine State. Angell was previously a research faculty member at the University of Florida before joining the USC Chan Division in 2020.

Using statistical probability modeling tools, the researchers identified significant differences by sex, race and ethnicity in non-acute health care use by autistic children.

"In recent years, researchers and clinicians have started to pay attention to understudied autistic groups, including girls and Black and Latinx children," Angell said. "We don't know much, though, about whether and how these kids are getting the health care they need. This analysis provides a starting point based in real-world clinical data to see, on a large scale, how these groups are utilizing not only primary health care, but also [specialty care](#) like neurology and psychology, that are important for treating conditions that commonly co-occur with autism."

## **The DREAmS team**

Angell is the director of the Disparity Reduction and Equity in Autism Services (DREAmS) Lab, which aims to identify, measure, understand and reduce disparities in autism diagnosis and services, especially for those who are under-identified with autism, underrepresented in research and underserved by health care systems. The DREAmS team uses various health services research methods and designs including surveys, in-depth qualitative methods, mixed methods approaches and—as in this study—large dataset analysis.

Upon analyzing for sex disparities, the researchers found that autistic boys, as compared to autistic girls, had significantly higher odds of any neurology and psychiatry/psychology visits, but lower annual rates of primary care, gastroenterology (GI) and neurology visits.

Upon analyzing for race disparities, Black/African American autistic children had significantly higher odds of any primary care, developmental-behavioral pediatrics (DBP) and neurology visits, but lower odds of any GI visits, and lower annual rates of primary care, GI, DBP and neurology visits.

Upon analyzing for ethnicity disparities, Hispanic/Latinx autistic children had significantly higher odds of any primary care, DBP and neurology visits, but lower odds of psychiatry/psychology visits; and higher annual rates of neurology visits, but lower annual rates of GI, DBP and psychiatry/psychology visits.

## **New answers, new questions**

Some results were rather unexpected, according to Angell, because they contradict previous research studies.

"Basing our assumptions off of patterns in the general population, we had expected females to use more health care than males, so we were surprised to learn that autistic males had significantly higher odds of neurology and psychiatry/psychology visits," Angell said.

"We were also surprised to find that Hispanic/Latinx autistic children had higher odds of any kind of visit, with the exception of psychiatry/psychology, because previous research has shown that Hispanic/Latinx autistic children have reduced access to subspecialty care."

As often happens in relatively understudied topics, new findings yield more questions than they necessarily answer: Are autistic boys using more health care services than autistic girls because clinicians are primed to "see" autism in boys more than they do among girls? Are autistic traits in girls less likely to be observed because clinicians are more likely to conflate them with other conditions—a phenomenon known as "diagnostic overshadowing?" Are non-White autistic children successfully getting their health needs met and managed during subspecialty visits?

"As primary and specialty care physicians increasingly have autistic children in their care, it is important that provider education and training for identifying and managing these children's [health needs](#) is based on recent data," Angell said. "Some important future studies will be to look more closely at why and how the utilization differences that we found are happening."

**More information:** Amber M. Angell et al, Effects of sex, race, and ethnicity on primary and subspecialty healthcare use by autistic children in Florida: A longitudinal retrospective cohort study (2012–2018), *Research in Autism Spectrum Disorders* (2022). [DOI: 10.1016/j.rasd.2022.101951](https://doi.org/10.1016/j.rasd.2022.101951)

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