Massachusetts General Hospital
Founding Member, Mass General Brigham

Lurie Center for Autism Celebrating 15 Years

August 2025

Give hope. Build health.

Dear Friends,

In 2024, we marked 15 years of the Lurie Center for Autism. Every day, as our team focuses on the needs of the patients we see in our clinic and individuals with Autism Spectrum Disorder (ASD) everywhere, we are inspired by the generosity of our community. Your commitment has been transformative not only for the Lurie Center but for the field as a whole.

When I first arrived at the Lurie Center in October 2011, I encountered a care model I had never seen before. At most academic autism centers, the program is centered around one medical discipline, typically psychiatry, neurology or behavioral pediatrics. The discipline of the program is usually determined by that of the founding provider of the program.

At the Lurie Center, however, I encountered providers from many disciplines, from neurology and gastroenterology to speech, occupational and physical therapy, with only a minor presence of my discipline, psychiatry. While I was not familiar with this multi-disciplinary model of collaboration within one center, I soon saw its importance. It allows providers at the center to evaluate and treat the patient from a whole-body perspective, rather than a brain-based approach alone.

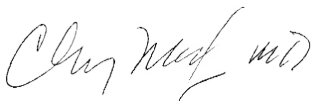
With this unique model, over the past 15 years the Lurie Center has established itself in the vanguard of comprehensive, multidisciplinary care for ASD and an essential lifeline for so many patients and families. The center has also become a global leader in establishing best practices for ASD research and treatment across the entire lifespan.

On one end of the age range, our teams have developed expertise in early diagnosis of ASD, when interventions and connections to community resources are most effective, and developed guidelines for pediatricians, primary care and family practitioners to ensure that many children and families can receive ongoing care close to home. As a result, our teams are able to focus on the more profound cases of ASD and work to improve quality of life for those too often overlooked.

At the other end, we are in a unique position as patients with autism age. The longitudinal view of ASD provided by our 15 years of experience is driving basic research into the molecular basis of the disorder, and clinical research that is revealing patterns that will help anticipate and mitigate the challenges of aging with ASD.

I'm convinced our whole-life, whole-body approach is the key to developing and optimizing treatment for autistic individuals going forward. I am so proud of the talent, accomplishments and shared commitment of our multidisciplinary staff, but none of this could be accomplished without the partnership and support of patients, families and friends. As you read these pages, I hope you will think of the many thousands of lives that have been changed for the better by our work and our community.

Warmly,



Christopher J. McDougle, MD
Director, Lurie Center for Autism

Contents

Clinical Highlights

Leveraging the General Hospital to Provide Holistic Care

Since our founding in 2009, our clinic has remained laser-focused on responding to the needs of our patients and families. Our primary mission is to enhance the lives of those affected by Autism Spectrum Disorder (ASD) and other neurodevelopmental conditions. We do this by providing exceptional clinical care, pushing the boundaries of knowledge through groundbreaking research and inspiring and training the next generation of clinicians and scientists.

As part of the Mass General Brigham (MGB) network, the Lurie Center's clinical and research teams are members of a broad community of the world's foremost clinicians and scientists tackling challenging neurological and behavioral disorders. Our teams collaborate seamlessly with colleagues at two first-class academic medical centers, Massachusetts General Hospital and Brigham and Women's Hospital, as well as McLean Hospital and others in the MGB system.

As a part of a general hospital, the Lurie Center has unprecedented access to clinical expertise across all dimensions of care, and teams are working to ensure that individuals with ASD can receive important preventative and interventional care for diseases that come with aging, like cancer, diabetes and hypertension.

Our teams collaborate with colleagues throughout the Greater Boston biomedical ecosystem, including Harvard Medical School, MIT, Boston College, Broad Institute and Harvard Stem Cell Institute, all of whom contribute to our goals of improving treatments and advocating for individuals with ASD and other developmental disorders across the lifespan.

Our holistic, multidisciplinary approach is flexible and responsive, and we have expanded the clinical and supportive services we offer to include both primary and specialty care, along with a host of psychological assessments and therapeutic offerings, as well as other services to support patients and families.

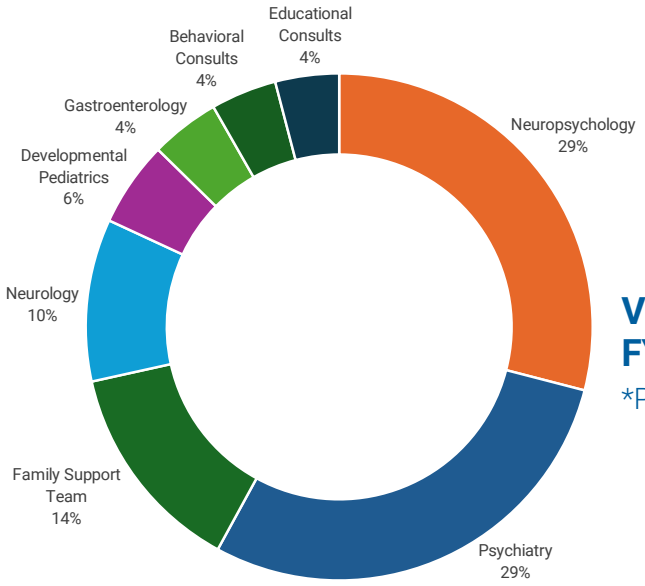
> "My job is to develop a strategy for how we move autism science forward in a very meaningful way. Ultimately, I want to see a tangible connection between the things that our research team can do and the patients we serve."
>
> Jacob Hooker, PhD, Scientific Director
> Lurie Center for Autism

Behavioral Health and Other Services

Recognizing that an evaluation of an individual's social, emotional and behavioral functioning is critical to gain a better understanding of their specific strengths and challenges and support their ability to enjoy the highest quality of life, the Lurie Center has expanded behavioral health offerings. Today, 10 psychologists and a team of social workers, along with a senior behavioral consultant and an educational consultant, offer the following:

- Neuropsychological evaluations
- Outpatient individual therapy
- Educational testing and consultation services
- Outpatient group therapy – including parent support and education groups like Autism 101, psychoeducation workshops and other group-based therapy
- Social work therapy services
- Behavioral consultation services

"I value the ability to work as a multidisciplinary team including the front desk staff, clinic and research administration, medical assistants, nursing, physicians from many specialties, psychologists and PT/OT/SLP. This allows us to provide outstanding care to adults and children who, due to social and communication difficulties, have a hard time getting their clinical needs met elsewhere in the community." — Susanna Mierau, MD

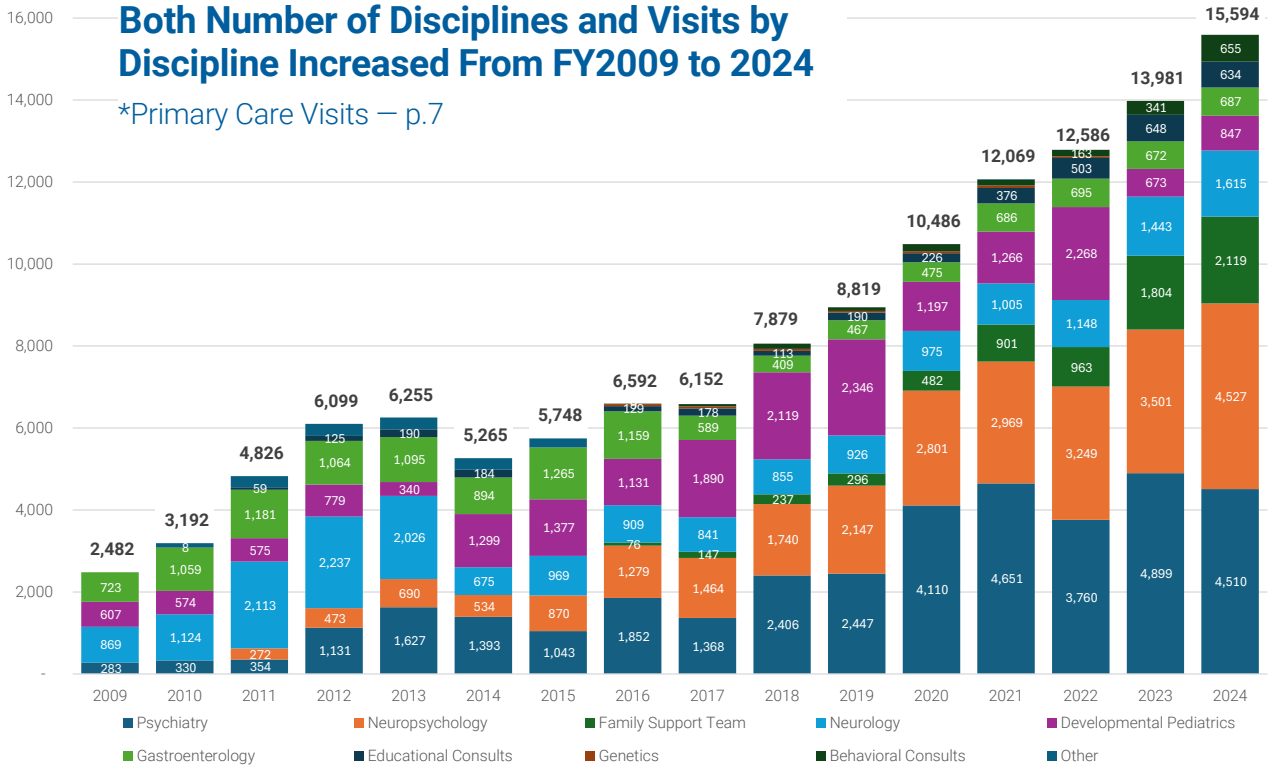


Visits by Discipline FY2024

*Primary Care Visits— p.7

Both Number of Disciplines and Visits by Discipline Increased From FY2009 to 2024

*Primary Care Visits — p.7



Overall Faculty and Staff Growth

Discipline	2009	2024
Neurology	4	6
Psychiatry	1	7
Developmental Pediatrics	3	2
Gastroenterology	1	1
Psychology	0	10
Family Support	2	4
Nursing	1	5
BCBA	0	1
Nurse Practitioner	1	1
Educational Consultant	1	1
Primary Care	0	1
Total	**14**	**39**

Faculty and Staff Growth by Discipline

Relative Size of Staff by Discipline, 2009 vs. 2024

Fully Integrated Primary Care

With the arrival of James Bath, MD, in 2022, the Lurie Center now has a clinician devoted to comprehensive primary care including routine check-ups and wellness visits, school and program physicals, sick visits and chronic disease management for patients of all ages. He coordinates care and communication with multispecialty teams to help patients and families navigate a complex healthcare system. Dr. Bath completed 1,320 primary care office visits in 2024.

"Thank YOU for making this critical addition to your team. Our family and so many others have already benefited and will continue to do so. We are just grateful for your relentless work and dedication to our family and our entire community."
– Patient family

"Dr. Bath is the bomb! So happy to find a good doctor, we waited years. Dr. Bath is awesome! We're so happy."
– Caregiver of 51-year-old patient

Nursing

Nursing is another area where the Lurie Center has made significant investments. Our nurses are central to our ability to see as many patients as we do. Regular phone contacts with patient families are conducted through the nurses' phone triage, providing a much-appreciated level of support and connection for our families and reducing the number of clinical visits needed. The volume of contacts our five-member nursing team fields is significant. For example, in the first six months of 2024 the nurses had 15,817 contacts with our patients.

"I'm proud to work at the Lurie Center because I can see the life-changing effects of the support, resources and medical care we have provided many of our patients for most of their lives."
—Jessica Flowers, MSN, RN, PMHNP

Serving the Spectrum

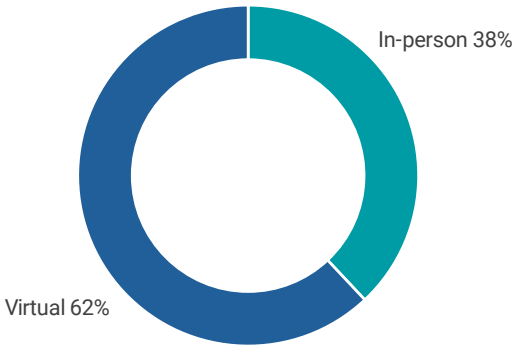
Recognizing the spectrum of autism-like developmental disorders, a number of subspecialty clinics now operate under the Lurie umbrella. These clinics provide unique opportunities to understand the genetic and biological bases of conditions including:

- Angelman Syndrome: Christopher Keary, MD
- Smith-Magenis Syndrome: Ann Neumeyer, MD
- Phelan-McDermid Syndrome: Ann Neumeyer, MD
- Williams Syndrome: Robyn Thom, MD
- Down Syndrome: Michelle Palumbo, MD

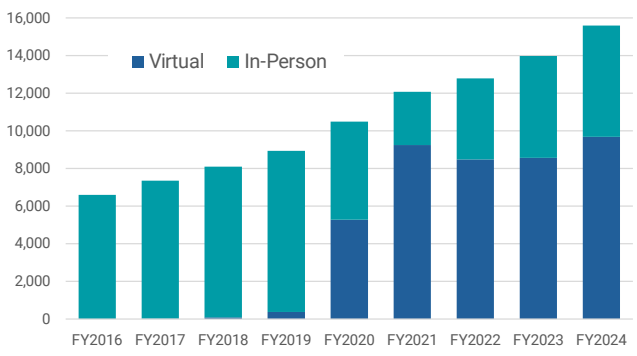
Virtual Visits: Flexibility and Accessibility

One positive outcome of the COVID-19 pandemic was the adoption of virtual visits as an approved standard of care. We have found them to be particularly beneficial for the Lurie population, easing the burden on families, reducing

2024 Virtual vs. In-person Visits



Trend Toward Virtual Visits 2016–2024



New Clinician Spotlight: Aditya Pawar, MD

"What drew me to psychiatry was that the field is thoughtful and nuanced. It's not always black and white — there are a lot of grays, and that's what makes it so fascinating. I love how psychiatrists have to really listen, not just to symptoms but to the person behind them and their story. This requires a deep sense of empathy. Even now, I'm constantly inspired by how psychiatry allows us to sit with uncertainty, to think deeply and to help people find hope and healing in meaningful ways.

"My work in the field of ASD at the Kennedy Krieger Institute and Johns Hopkins Medical Institute further fueled my interest in neurodevelopmental disorders. I saw the profound impact of specialized, multidisciplinary care on individuals and families, which made joining the Lurie Center a natural next step in my career. Continuing to work in autism care and research within such a renowned institution felt like the perfect fit for my professional goals and personal passion.

"I'm fortunate to work with amazing colleagues who share a deep commitment to treating individuals with ASD. The supportive, kind environment, where everyone is genuinely dedicated to making a difference, and, in partnership with patients and families, engaging in research that will directly inform patient care."

our patients' anxiety. By removing these factors, virtual visits often allow for more relaxed conversations and provide insights into our patients' home environments. We have increased the number of virtual visits we offer, with 62% of our visits now conducted over video.

Our People Are Our Greatest Strength

The Lurie Center's reputation and position within a world-class hospital system, as well as our teams' commitment to patients with ASD and other neurodevelopmental disorders, attracts some of the very best clinicians and researchers from around the world. They know they will have a unique opportunity to collaborate with outstanding colleagues, exploring novel investigative pathways in their pursuit of answers to the mysteries of these developmental disorders.

Looking Ahead: Responding to Changing Patient Needs

Medical and social service providers around the world are beginning to realize that ASD is a lifelong condition, its effects persisting well beyond its childhood onset. The Lurie Center has been a leader in recognizing that the approach to medical care for people with ASD must change as they age.

The importance of expanding our care model to include aging individuals with ASD is highlighted by the changing demographics of our patients. When the Lurie Center was established in 2009, a majority of our visits were with individuals younger than 18. Today, those numbers have shifted, with 41% of our patients now over the age of 18 (primarily ages 20–39), accounting for 43% of visits. Because we have followed so many of these individuals over time, we have an unparalleled opportunity to understand the intersection of autism and aging.

Lurie Center Clinical Faculty and Staff

Michelle Palumbo, MD
Psychiatry & Pediatrics

Christina Sakai, MD
Developmental Pediatrics

Devina Savant, MD, MBBS, Developmental Pediatrics

Sarah Kadzielski, MD
Gastroenterology

Douglas Maus, MD, PhD
Neurology

Susanna Mierau, MD, PhD
Neurology

Ann Neumeyer, MD
Neurology

Ron Thibert, DO, MMSPH, Neurology

Shelley Waite, MD
Neurology

Leah Wibecan, MD
Neurology

Robert Doyle, MD
Psychiatry

Robyn Thom, MD
Psychiatry

Nora Friedman, MD
Psychiatry

Christopher Keary, MD, Psychiatry

Christopher McDougle, MD, Psychiatry

Scott McLeod, PhD
Psychology

Kirstin Birtwell, PhD
Psychology

Rebecca Doggett, PhD
Psychology

Gillian Erhabor, PhD
Psychology

Rachel Goldin, PhD
Psychology

Renee Green, PhD
Psychology

Todd Miller, PhD
Psychology

Alyssa Milot Travers, PhD, Psychology

Bretton Mulder, PsyD
Psychology

Lisa Nowinski, PhD
Psychology

Jill Pineda, PhD
Psychology

Jessica Flowers, MSN, RM, PMHNP

Nicole Simon
Sr. Behavioral Consultant

Susan Kessler, MSW, LICSW

Amy Levitan, MSW, LICSW, CCBT

Julie O'Brien, MEd, LMHC

Ellen Roth, MSW, LICSW

Gretchen Timmel, MEd
Education Specalist

Samantha Vanderslice, MD, Psychiatry

Aditya Pawar, MD
Psychiatry

James Bath, MD
Primary Care

Award-Winning Faculty

Select Awards in Recent Years

2025

Robyn Thom, MD. The inaugural Mary Armstrong Amory Endowed Scholar in Autism Care and Research Award. Dr. Thom specializes in diagnosing and treating comorbid psychiatric conditions in individuals with ASD and other developmental disabilities. One of our stellar junior faculty, Dr. Thom has the potential to become a world expert in her area of investigation and clinical practice.

2024

Nicole Zürcher Wimmer, PhD, Director of Neuroimaging at the Lurie Center for Autism. Rising Mentor Award. Dr. Zürcher received this prestigious award in recognition of her outstanding mentorship of trainees and junior scientists.

Christopher McDougle, MD, Director of the Lurie Center for Autism. Brain & Behavior Research Foundation's 2024 Ruane Prize for Outstanding Achievement in Child and Adolescent Psychiatric Research.

2023

Ann Neumeyer, MD. Elected to the American Pediatric Society.

Christopher McDougle, MD. 2023 American Academy of Child and Adolescent Psychiatry Outstanding Mentor at the American Academy of Child and Adolescent Psychiatry 70th Annual Meeting.

2022

Christopher Keary, MD. Excellence in Clinical Instruction Faculty Award from the Harvard Medical School Class of 2022.

Jacob Hooker, PhD. National finalist in chemistry for the 2022 Blavatnik National Award for Young Scientists.

Robyn Thom, MD. Mass General Center for Faculty Development's Anne Klibanski Visiting Scholars Award.

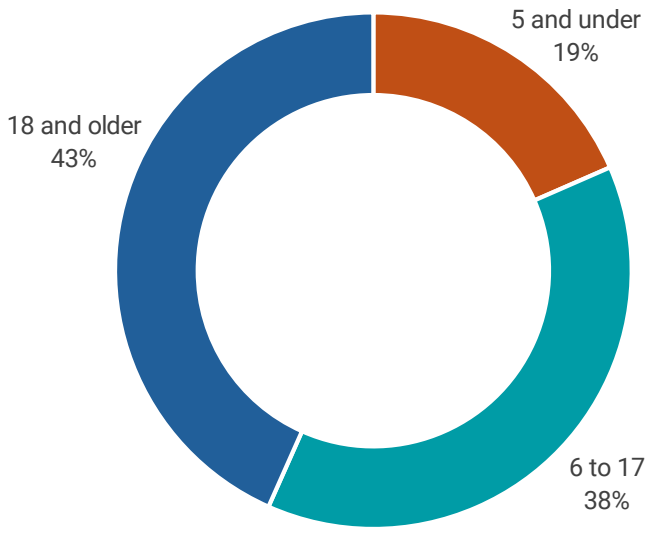
Christopher McDougle, MD. Peter M. Silberfarb, MD Lectureship, Department of Psychiatry, Geisel School of Medicine at Dartmouth, Dartmouth-Hitchcock Medical Center, Lebanon, NH, May 24, 2022.

"Working at Lurie affords me the opportunity to directly impact the lives of people with ASD/IDD (intellectual and developmental disabilities) and improve healthcare access for people with autism — for whom healthcare has not historically been accessible and continues to be inequitable. Through my work as a clinician, I have seen firsthand why the Lurie Center's mission — being able to serve, understand and advocate for people with autism across the lifespan, including patients who are facing cancer treatments or end of life care — is so important. The work we do matters, now and in the future." —Jill Pineda, PhD

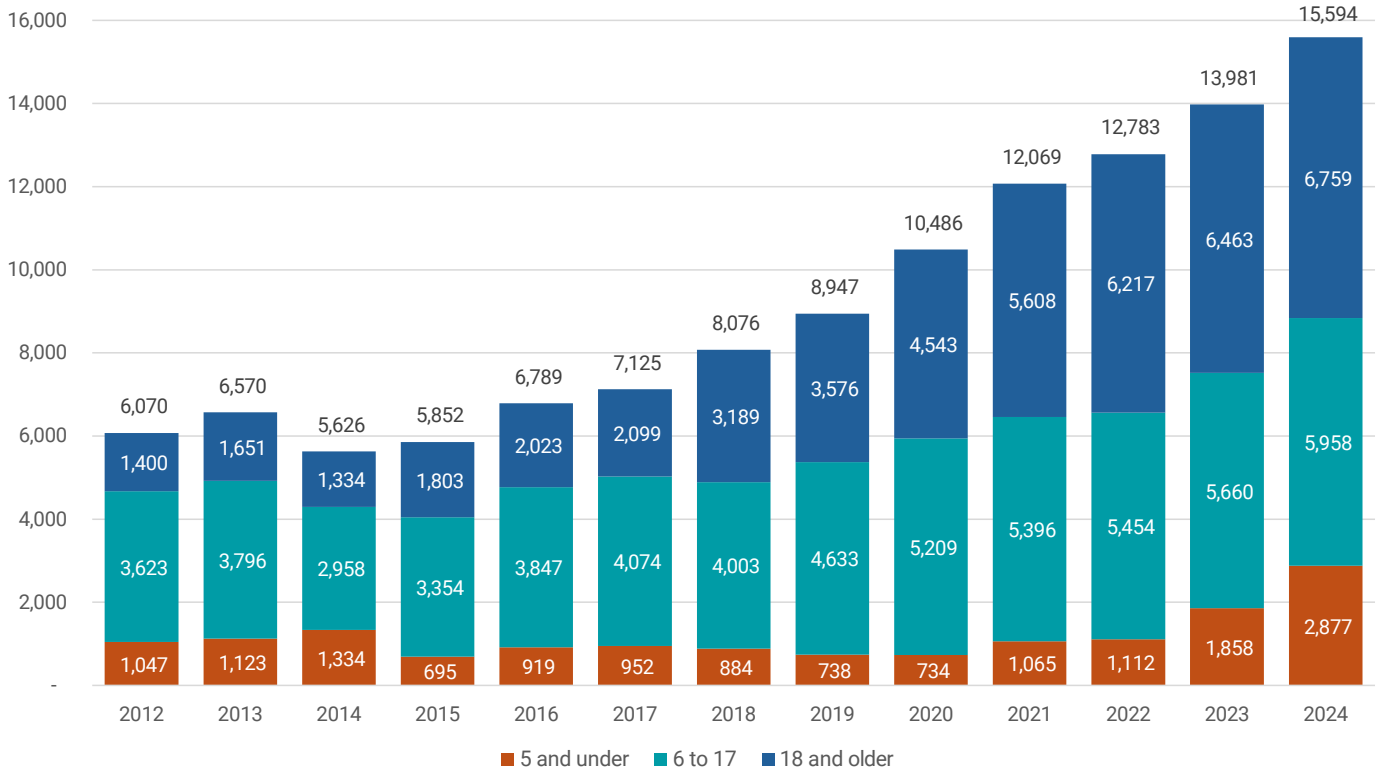
Our goal over the next decade is to develop and implement a plan for autistic adults transitioning to the geriatric phase of life and the medical care and treatment they need. We are developing a model to help individuals with ASD age well. We hope it will be a template for providers globally as we prepare for an aging population of individuals with ASD.

We are also engaging with patients and their families on the topic of aging. We've hosted a series of focus groups to understand hopes and concerns, and recently implemented a detailed questionnaire to track how patients aged 35 and older are coping with aging. Since there is almost no existing data, this study is critical to beginning to understand what happens to autistic individuals as they age. The questionnaire tracks everything from health issues, such as cognition and medications, to living situations and transportation methods. Participants will be asked to revisit the questionnaire on an annual basis, providing the basis for a broad, longitudinal study.

Patient Visits by Age: FY2024



Change in Patient Visits by Age: FY2012–2024



Transforming Autism Research and Discovery

Under the leadership of Scientific Director Jacob Hooker, PhD, our interdisciplinary research team of physicians and scientists has prioritized opportunities to translate discoveries in the laboratory into meaningful treatments for our patients and their families. The team collaborates with researchers across MGB and around the world to uncover the root causes of ASD and related disorders — and to discover the most effective interventions.

Dr. Hooker has laid out three important objectives for our research:

1. Advancing a Translational Research Culture Focused on Real-World Impact

Research at the Lurie Center has increasingly aligned around a central question: How will this ultimately improve the lives of individuals and families affected by neurodevelopmental conditions? There has been a deliberate shift to connect basic and preclinical work to translational outcomes, encouraging deeper integration between scientific discovery and clinical care. This evolving culture fosters collaboration and keeps impact at the forefront.

2. Centering Families in the Research Process

The needs and insights of families have become a driving force in shaping our research agenda. Their lived experience has influenced study design, outcome measures and the kinds of questions we prioritize. Rather than treating families as participants, we engage them as partners, ensuring that the science we pursue is grounded in relevance and urgency.

3. Building Research Platforms That Are Scalable, Sustainable and Accessible

We have streamlined and stabilized the research infrastructure, making it easier for both families and investigators to engage. We've integrated clinical-research workflows, shared tools and centralized resources that have reduced friction and increased participation. These operational investments are helping to accelerate timelines, improve data consistency and quality and support long-term collaboration across projects and teams.

Expanding Expertise: Lurie Center Faculty Associates

In recent years, our research program has undergone an important evolution from a focus on conducting individual studies to building a vibrant, multidisciplinary community for discovery and innovation. This shift was sparked by a simple but urgent truth: even the most dedicated team can only go so far on its own. While we continue to engage in some traditional individual studies, to truly accelerate progress, we needed to bring more expertise "under the tent."

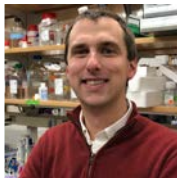
For this reason, we launched the Lurie Center Faculty Associate Program two years ago, which has since grown to include 16 faculty associates. These research faculty, based at MGB and other leading institutions across the country, are key members of the Lurie Center's scientific community. Faculty associates participate in meetings, lead, and collaborate on research projects, and apply their specific expertise to advancing autism research.

Strategic collaborations accelerate discoveries and bring researchers with varied expertise together to work on complex problems. ASD is such a complex and multi-faceted condition that it requires different approaches and perspectives — neuroscientists, neuroimagers, immunologists, gastroenterologists, psychologists and more.

The Lurie Center research program is now the largest in MGB Pediatrics in terms of expenditures. Growth over the past few years has been tremendous and funding has become increasingly diversified, including major federal awards to several junior faculty from the NIH and Department of Defense.

Lurie Center Research Faculty


Kirstin Birtwell, PhD


Evan Bordt, PhD


Jacob Hooker, PhD


Sarah Kadzielski, MD


Christopher Keary, MD


Marcia Kingsbury, PhD


Christopher McDougle, MD


Susanna Mierau, MD, PhD


Ann Neumeyer, MD


Lisa Nowinski, MD


Jill Pineda, PhD


Michelle Palumbo, MD


Caitlin Ravichandran, PhD


Sudhir Thakurela, PhD


Ron Thibert, DO, MMSPH


Robyn Thom, MD


Angélica Torres-Berrío, PhD


Nicole Zürcher, PhD

Lurie Center Faculty Associates


Staci Bilbo, PhD, Duke University


Bill Carlezon, PhD McLean Hospital


Sundari Chetty, PhD Harvard Stem Cell Institute


Jun Huh, PhD Harvard Medical School


Nitya Jain, PhD Mass General


Gagan Joshi, MD Mass General


Elizabeth Lawson, MD, MMSc Mass General


Michael Levy, MD, PhD Mass General


Dara Manoach, PhD Mass General


Madhu Misra, MD, MPH UVA

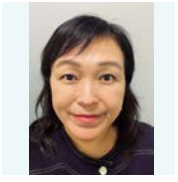

Maria Mody, PhD, CCC-SLP Mass General


Tatiana Petrozziello, PhD Mass General


Tom Quatieri, ScD MIT Lincoln Labs


Elise Robinson, ScD Mass General, Broad Institute of MIT and Harvard


Caroline Smith, PhD, Boston College


Emi Takahashi, PhD, Mass General

Fostering Dynamic, Continual Collaboration

We are proud to be building not just a research program but a research ecosystem. We've made it a priority to foster opportunities for our research community to come together, share knowledge and spark new ideas. In 2023, we launched the first annual Lurie Center Scientific Retreat, a gathering of Lurie Center faculty and research staff with colleagues from across MGB. The event exceeded all expectations, creating space for rich discussion, collaboration and inspiration.

Thanks to its overwhelming success, the retreat has grown into a cornerstone event, expanding in both scale and scope. This year, we welcomed nearly 100 attendees including leading experts from across the country. Together, participants explored new findings, exchanged ideas, and formed and strengthened collaborations.

Lurie Center Scientific Retreat 2024 Aging Well with Autism: Lurie Center Scientific Director, Dr. Jacob Hooker (center), with invited speakers: Dr. Ipsit Vahia (McLean Hospital, MGH) (L) and Dr. Lauren Bishop (University of Wisconsin-Madison) (R).

Supporting a Collaborative Research Ecosystem

In tandem with growing this collaborative network, we are expanding resources to support it. Below are some examples of resources and platforms we have created to facilitate and broaden our research reach. These resources and platforms are rapidly becoming essential tools to accelerate discovery.

Autism Research Core

In the fall of 2023, the Lurie Center launched the Autism Research Core (ARC) through the MGB core system. Designed to support investigators in discovering, developing and implementing therapeutic approaches for ASD, the ARC fosters collaboration between diverse researchers, autism experts and research participants. The core provides comprehensive clinical research services, including neuropsychological testing and clinical research study implementation (including recruitment and regulatory management, nursing services, phlebotomy and sample processing, and consulting services and nursing services). The ARC aims to promote multi-disciplinary studies, allowing researchers from diverse backgrounds to contribute high-quality research to the field.

Biobank of Autistic Blood Samples

In the spring of 2023, the Lurie Center launched a biobanking effort when it came to our attention that MGB researchers interested in analyzing blood samples to better understand ASD could not obtain sufficient samples. In partnership with the MGB Biobank, we have been working to increase the number of people with ASD who chose to enroll. Increasing the number of samples in the biobank from patients with ASD and their family members could help Lurie Center researchers, as well as investigators across MGB, learn more about the biological characteristics of ASD and which treatments are most effective for which subtypes of patients. In 2024, the Lurie Center Biobanking effort achieved the milestone of enrolling its 100th participant. This ongoing work is already accelerating the pace of discovery.

Lurie Center Research Registry

In 2024, we launched the Lurie Center Research Registry, an IRB-approved platform where interested individuals, primarily Lurie Center patients and their family members, can express not only their willingness to participate in research but also specify the types of studies most relevant to them. This tool allows us to better match potential research participants with suitable studies, enhancing participant experience and streamlining recruitment for investigators.

Our Research Areas of Focus Mirror Areas of Clinical Focus

Today, we are not only expanding our collaborative research network but also reimagining how we set our priorities. More than ever, families and patients are helping shape the direction of our work. Through direct conversations with clinical providers and a formal survey, we ask, What matters most to you? And we listen.

From this information we've learned that understanding and treating anxiety remains a top concern for both autistic patients and their caregivers. This information helps guide our allocation of research efforts. Currently we have research studies underway in seven of the top eight areas of research interest (we do not have active studies specifically looking at repetitive behaviors).

Topics Identified by Registry Participants as High Priorities for Research:

Anxiety
Communication and Language
New Ways to Measure ASD
Genetics
ADHD
Repetitive Behaviors
Medication/Treatment Trials
Sleep

> "The research team is an amazing group of individuals. They were attentive and determined to improve the practice of medicine through their findings." —2024 research participant

To a very large extent, our research areas of focus mirror our clinical areas of focus. Just as we are increasingly focused on clinical needs of individuals with profound autism, many of our research studies focus on the needs of that subset of the autistic population.

Recognizing the Needs of Those with Profound Autism

The Lurie Center is taking significant steps to represent all individuals affected by ASD in our research, especially those with profound autism. These individuals may have limited verbal and intellectual abilities and often require considerable assistance in their daily lives. Despite making up a significant portion of the ASD community, they have not been adequately represented in research.

To achieve this, we are conducting studies in everyday environments to reduce the burden for families and collect more real-world data. Using tools like home EEG devices for sleep studies and services like mobile phlebotomy that enable blood collection at home, we've been able to include more individuals with profound ASD in research. Efforts to ensure our research reflects the full range of experiences within the ASD community will make findings more relevant and impactful for everyone affected by ASD.

One of our flagship projects in this area is a study about communication in adults with minimally verbal ASD. The past few decades have seen dramatic progress in speech, language, auditory and brain science, as well as digital signal processing, artificial intelligence, and human/brain-computer interfaces, with resulting breakthroughs in modern communication technology. Yet, a huge gap still exists in the application of these technologies to help minimally verbal individuals with ASD discover their "own voice" and learn to speak or to communicate through assistive devices.

The goal of the Communications Program Project Grant (CPPG) is to bridge this communication technology gap by bringing together leading experts from the Lurie Center and the Martinos Center at Mass General with MIT Media Labs and MIT Lincoln Laboratory to collaborate on clinical characterization, protocol design, brain imaging, innovative real-time on-body sensing of human neurophysiology and signal processing and computational modeling using advanced analysis methods and mobile off-body multi-modal platforms.

Prior work from our team points to a role for fine motor abilities in speech and language. The CPPG project builds on this work, with recent findings supporting a deficit in

Researcher Profile: Marcy Kingsbury, PhD

Marcy Kingsbury, PhD, is a neuroscientist at the Lurie Center for Autism whose research explores how early life stress, including birth-related stress, environmental toxicants and maternal stress, affects brain development and gut-brain interactions. Based in Charlestown, MA, Dr. Kingsbury leads a lab focused on understanding how physiological stressors shape the developing brain and contribute to neurodevelopmental conditions such ASD.

A central theme of her work is the gut-brain axis, the bidirectional communication network between the gastrointestinal system and the brain. "I am particularly interested in how the microbiome can alter neurodevelopmental trajectories and impact risk for autism," she explains. "Our goal is to understand how the brain, gut and microbiome interact differently in ASD, and whether improving gut health can support better cognitive and behavioral outcomes."

Given that many individuals with ASD experience gastrointestinal symptoms, Dr. Kingsbury's work provides important insights into how gut health may influence core features of autism and opens new avenues for intervention during early brain development.

Q: What is the most rewarding aspect of your job?

"I enjoy mentoring students in the lab and teaching them how to do science. I enjoy teaching students how to ask scientific questions and to develop projects to better understand a specific mechanism or process. I like working at the Lurie Center because I can explore questions that could really have impact for patients and families."

motor control and execution in conjunction with cognitive engagement across a range of ocular motor, manual motor and speech tasks. The insights are revealing potential profiles in minimally verbal individuals with ASD for use in our next steps, specifically the development of tailored applications for personalized interventions using auditory, somatosensory and attention feedback to promote multimodal communication strategies.

Why It Matters
For too long, individuals with profound autism have been left out of research. The CPPG not only helps us better understand the unique challenges faced by individuals with profound autism it also holds the promise of developing tools and technologies that can unlock new ways for them to connect and express themselves.

Understanding the Health and Well-being of Autistic Adults

Autistic adults are at increased risk for excess bodyweight and hypertension, yet the prevalence of these conditions and clinical predictors haven't been understood. In 2022, Dr. Robyn Thom and collaborators conducted a retrospective chart review of over 500 patients with confirmed ASD to assess comorbidities. The data showed a high percentage of metabolic comorbidity despite an average age of only 28. The study showed that 28% of autistic adults were overweight, 35% were obese and 11% had hypertension. The prevalence of these medical comorbidities highlights the need to closely monitor at-risk patients and use preventative care measures to reduce the risk of diabetes, cardiovascular disease and other associated conditions.

Lurie Center researchers published a study looking at the uptake of cervical cancer prevention measures among adolescent and adult females with ASD. The results show that females with ASD face significant gaps in receiving these preventative health services. In the study, 47% of autistic adult females reported receiving at least one human papillomavirus (HPV) vaccine dose, and only 34% were fully vaccinated. Additionally, only 38% of adult women with ASD had ever received a PAP smear, a rate much lower than the general U.S. population. Addressing these gaps could improve both health outcomes and quality of life for women with ASD. This study further highlights the need for greater preventative care and screening in autistic adults.

Why It Matters
As the autistic population ages, we urgently need to understand both the medical and psychosocial ramifications. Early studies suggest that older adults with ASD face higher rates of chronic health conditions, yet they are often overlooked in preventative healthcare, resulting in delayed diagnoses and poorer health outcomes. Equally important are the psychosocial challenges they face as a result of the loss of family caregivers, changes in support systems and social isolation. Despite the significant need, research on aging in autism remains extremely limited. By investing in studies focused on both physical health and the lived experiences of older autistic adults, we can begin to close critical gaps in care, improve quality of life and ensure that individuals with ASD can age with dignity, connection and well-being.

Spotlight on a New Collaboration: Participation in SPARK, the Largest Autism Study in the Country

Patients and families have consistently expressed strong interest in better understanding ASD through the study of underlying genetic factors. This feedback was a key motivator for the Lurie Center to join the SPARK (Simons Foundation Powering Autism Research) network as a study site in 2025.

SPARK is the largest ASD research study in the United States, a growing community of autistic individuals, their families and researchers working together to advance the understanding of ASD. Its mission is to improve the lives of people with autism by identifying genetic and environmental contributors and informing more effective therapies, treatments and supports.

To date, SPARK has enrolled more than 380,000 participants, including 157,000 individuals with ASD and their first-degree relatives. Importantly, autistic adults and their families are not only participants — they also serve as staff, advisors and community partners helping to guide and shape the study. As a participating site, the Lurie Center is now able to offer free genetic testing through SPARK.

Why It Matters

Understanding ASD requires collaboration on a national scale, and by joining SPARK, the Lurie Center is contributing to an unprecedented effort to recruit a large, diverse participant base that provides a powerful foundation for uncovering the complex genetic and environmental factors that contribute to ASD. By dramatically expanding the number of individuals and families participating in research, SPARK accelerates the pace of discovery.

Additionally, SPARK participants form a vibrant community that can be engaged for a wide range of future studies, helping research teams launch new projects more quickly. The Lurie Center's participation in SPARK ensures our patients and families have access to cutting-edge research opportunities while contributing to discoveries that will benefit the entire autism community.

Spotlight on a Long-Standing Project: Understanding the Role of the Immune System in ASD

The Lurie Center is deeply committed to advancing understanding of the complex biology underlying ASD. One promising and rapidly evolving area of research focuses on the possibility that, for some individuals, immune dysfunction may play a central role in the development or expression of ASD.

Our multidisciplinary team of clinicians and scientists is exploring whether there may be a distinct immune-related subtype of ASD. Identifying such a subtype could pave the way for new, targeted therapeutic strategies, bringing us closer to personalized approaches to care.

What makes this project particularly unique and powerful is the level of collaboration and the number of multidisciplinary approaches all converging on the same critical questions. This integration of expertise aims to accelerate meaningful breakthroughs that directly impact care and support.

There are three main "prongs" of this study: clinical, neuroimaging and preclinical.

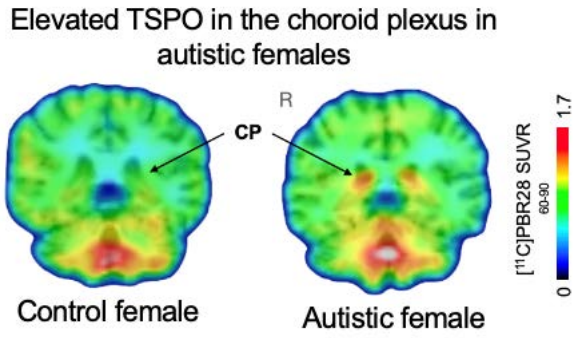
Clinical Study: Understanding the Role of Autoimmunity in ASD

Research suggests that individuals with ASD may be more likely to have a family history of autoimmune conditions, pointing to potential shared genetic vulnerabilities. However, inconsistencies in past findings — largely due to reliance on self-reported data — have left this link unclear. Building on earlier work by Dr. Christopher McDougle and colleagues, a new study at the Lurie Center combines self-reporting with biological markers and clinical assessments to clarify the relationship between ASD and inherited familial autoimmunity.

Neuroimaging Study: Understanding the Role of Neuroinflammation in ASD

Neuroimaging studies are providing powerful insight into how inflammation in the brain may contribute to ASD. Over the past 10 years, we've generated the largest dataset of PET-MRI imaging data to measure translocator protein, or TSPO, in ASD. TSPO is expressed on the mitochondria and is involved in immune function. Researchers led by Nicole Zürcher, PhD, the center's director of neuroimaging and an assistant professor of radiology at Harvard Medical School, observed elevated levels of TSPO in specific brain regions of adult females with ASD compared to neurotypical females.

The choroid plexus may be the key region involved in an immune subtype of ASD.



Lila & Tseng et al., under review

Measurements from MRI scans of males with ASD have also shown that the size of the choroid plexus is significantly enlarged compared with neurotypical controls. The choroid plexus is a network of cells within the ventricles (the hollow regions of the brain) that serve many critical functions including producing cerebrospinal fluid and a potential role in neuroimmune function, as the plexus is enriched in immune cells.

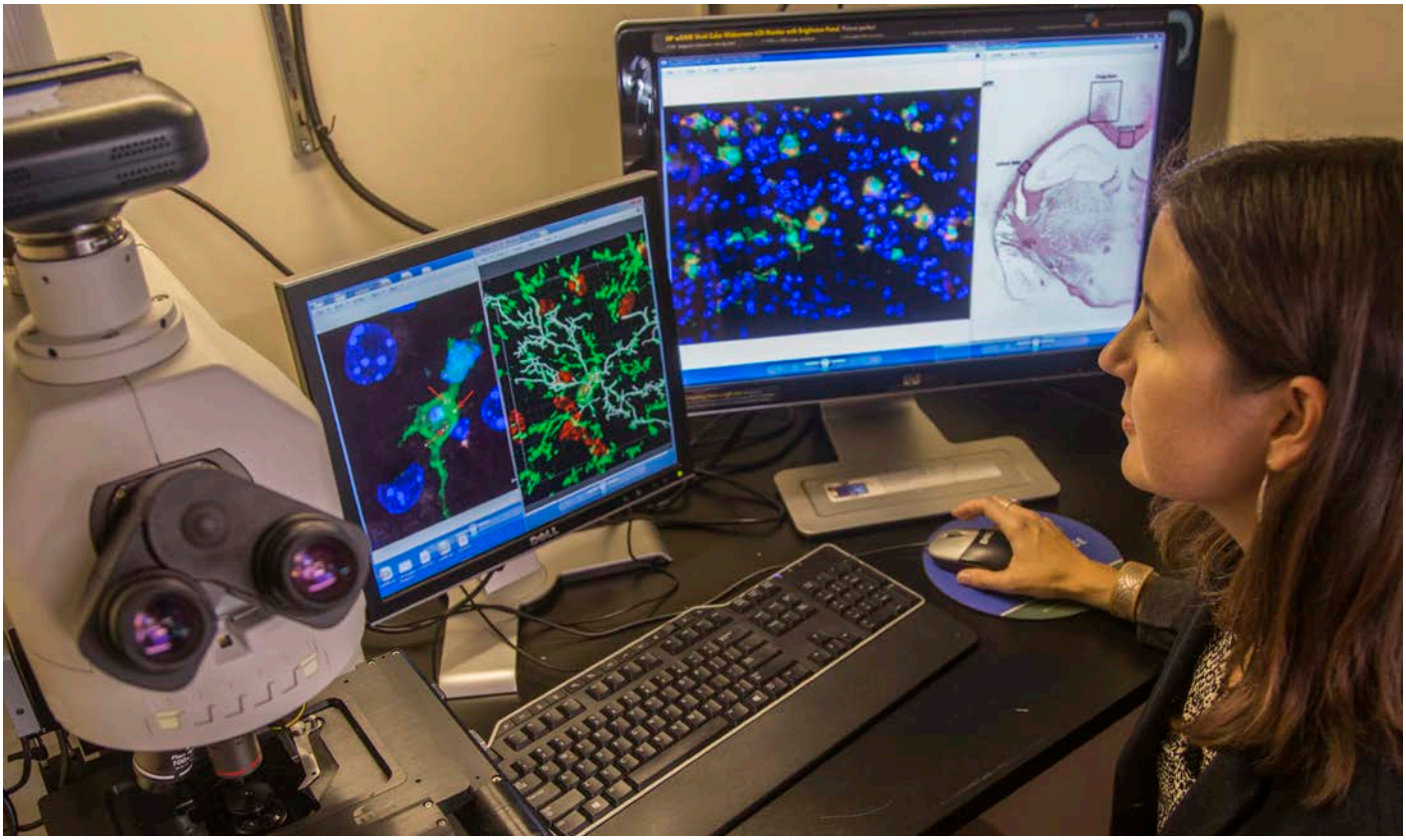
Preclinical study: Using Mouse Models to Understand the Effects of Early Immune System Activation

Studies in animal models and humans link early maternal immune activation during pregnancy to a higher risk of ASD; research led by Evan Bordt, PhD, demonstrated these results in male-specific vulnerabilities. In a mouse model using lipopolysaccharide exposure, only male mice exhibited reduced social behaviors linked to mitochondrial dysfunction in microglia. Artificially manipulating hormone levels in females induced similar vulnerabilities, underscoring the interplay between immune activation and hormonal influences in shaping sex-specific risks for ASD.

Why It Matters

Understanding the role of the immune system in ASD has the potential to fundamentally reshape how we approach diagnosis and treatment. If we can identify a biologically distinct immune-related subtype of ASD, we may be able to develop new interventions that are more precisely tailored to the needs of those individuals.

> "I am incredibly proud to be part of a team that not only provides cutting edge care for all ages and ranges in severity of ASD, but is also inspiring and training the next generation of clinicians and scientists and conducting ground breaking research."
>
> —Robyn Thom, MD



Education and Advocacy

A key pillar of the Lurie Center's mission is education, with a dual focus: providing targeted training and professional development for medical and research professionals, and offering accessible, evidence-based information for individuals with ASD, their families and the broader community.

On the professional side, the Lurie Center is committed to expanding the pipeline of clinicians and scientists equipped to work in the field of ASD and related neurodevelopmental disorders. Through structured training opportunities, mentorship, clinical shadowing and interdisciplinary collaboration, we aim to foster the next generation of leaders in ASD research and care. By getting involved in designing curriculums and getting students involved in the day-to-day practices of clinical care, we are preparing a workforce that is not only more knowledgeable but also more responsive to the complex and evolving needs of the autism community.

Equally important is our commitment to educating patients, families and the general public. We provide resources, community webinars and individualized guidance to help families navigate the healthcare and educational systems, understand the latest research developments and advocate effectively.

Paige Hickey Townsend, PhD

Natasha Bobrowski-Khoury, PhD

Ya-Chin Chen, PhD

Elisa Guma, PhD

Indra Bishnoi, PhD

Meredith Pecukonis, PhD

2024 Robert and Donna Landreth Fellows

The Landreth Fellowship was established in 2022. It supports recruitment of promising postdoctoral researchers.

Medical Education

Our medical educational initiatives include a summer internship for undergraduates, Harvard Medical School curricula electives, month-long pediatric and neurology rotations as well as electives, and psychology internship and fellowship programs at the undergraduate, doctoral and postdoctoral levels.

In addition, the Robert and Donna Landreth Fellowship for Translational Research, supported by a philanthropic gift, provides one to two years of support for pilot projects to as many as three postdocs annually.

Summer Internship for Undergraduates

In response to a critical need for skilled professionals passionate about ASD care, we initiated a summer internship program for undergraduates in 2022. We expanded the program in 2023 and 2024, and welcomed a new cohort of students in June 2025. This program provides hands-on, multi-disciplinary experience, fostering a new generation of professionals dedicated to research and medicine with a focus on ASD.

"This internship has been one of the most rewarding experiences of my college career and has helped shape my future career path in medicine. I am incredibly thankful for the opportunity to have worked beside such a devoted team." — Hannah G., 2023 Intern

"Observing Dr. Neumeyer, a neurologist and the Medical Director of the Lurie Center, solidified my passion for medicine and neurology. Her dedication and expertise inspired me to pursue this path." — Sarah M., 2023 Intern

"This experience has fueled my commitment to contribute to the field through research and advocacy. The Lurie Center has set a standard of excellence that I am determined to uphold." — Ariana G., 2024 Intern

2022 Summer Undergraduate Intern Cohort

2023 Summer Undergraduate Intern Cohort

2024 Summer Undergraduate Intern Cohort

With the recognition that all disciplines of medical training programs need to develop basic expertise in ASD, MGB pediatric residents now complete a formal one-month rotation at the Lurie Center to learn to diagnose and treat autistic individuals through a combination of observation and individual or small group, interactive teaching.

The child psychiatry fellows at Cambridge Health Alliance also have a required rotation in neurology at the Lurie Center, where they learn the neurological issues in patients with ASD and neurodevelopmental disorders.

Lurie offers elective rotations for residents and fellows from both Mass General and other Harvard teaching hospitals in areas including psychiatry, neurology and gastroenterology.

Additionally, with a focus on developing interest in ASD early in the training cycle, the Lurie Center offers an immersive month-long rotation for 3rd and 4th-year medical students through Harvard Medical School. This elective draws both local and international students.

Patient, Caregiver and Community Education and Training

We are honored to partner with the Nancy Lurie Marks Family Foundation and Havard Medical School to help develop resources for families through the Adult Autism Health Resources website (https://adult-autism.health.harvard.edu) and TEAMS (Target Education for Autism Across Medical Specialties) initiative — providing toolkits and resources, including downloadable forms and communication tools for sharing with staff, patients and service providers. The TEAMS Program focuses on transitions from pediatric care to adult care across medical specialties and across the lifespan with educational materials appropriate for both medical professionals and patient families.

Our initiatives especially for families include workshops and toolkits covering a wide variety of topics, including “Safety at Home and in the Community” and “Navigating the IEP for Your Child with Autism.”

> “I wanted to share that I put our Crisis Prevention Institute class training to immediate use upon coming home today. I was able to block, move, and remain calm with greater awareness and intention. It felt empowering to have the skills and knowledge to support him in that moment — so thank you!"
> —Participant, Managing Aggression

> "The Autism 101 sessions have been phenomenal! Thank you so much! Hands down, it has been the best info I have received about autism to date. The info you provided was so applicable and thorough. I also appreciated the mind/body focus for not only the kiddos, but parents as well."
> —Participant, Autism 101

In addition, the Lurie Center launched the Healthcare Access for Autism Project (HAAP) in September 2023 to improve the accessibility of healthcare services for individuals with ASD. Led by Jill Pineda, PhD, and supported by the C.J.L. Foundation, HAAP develops:

- Visual supports and other materials to help individuals prepare for and tolerate a range of preventative medical care, including procedures and diagnostic testing.
- Trainings to prepare healthcare providers in the delivery of care to individuals with ASD/IDD (intellectual and developmental disabilities).
- Avenues for broad dissemination, including online tools and resources, so that they are widely accessible to patients, families, clinicians and other caregivers.
- “Social Stories” visual support tools for patients, families and providers, including a Blood Draw Tip Sheet, Blood Draw Social Story and a Colonoscopy Social Story.

Training for patients and families

- Parent and Caregiver Workshops: expanded from one workshop in 2014 to 24 workshops this year on topics across the lifespan.
- Lurie Center Coffee Convos: monthly small gatherings of around 15 attendees started in 2016. We now average 295 sign-ups per session as of last year; these are also recorded and have garnered more than 9,000 views on YouTube.

Lurie Center Newsletter

- Our bimonthly newsletter, LurieNow, is an important education and engagement tool for patients and families. This emailed newsletter, started in 2023, averages 2,435 opens per issue.

LurieNOW

Lurie Center for Autism bimonthly newsletter

February 2025

New Faces at the Lurie Center for Autism

We're pleased to introduce these individuals and grateful to have them on the team. Meet our newest team members here.

Ask a Researcher: Does Illness During Pregnancy Increase the Likelihood that the Baby will have Autism?

Research over decades has identified a link between infection during pregnancy and an increased likelihood of autism spectrum disorder (ASD). However, the increase in risk is small, and it's important to put this information into perspective. Many expectant mothers become ill during pregnancy, and most do not go on to have an autistic child. In this article, we'll explore what research is telling us about the complex relationship between ASD and maternal infections, including COVID-19. Read more.

Supporting Siblings - Tips for Parents and Caregivers

The Lurie Center for Autism invites you to join us for a presentation on Wednesday, February 12th at 6:30pm, about *Supporting Siblings - Tips for Parents and Caregivers*. During this presentation, we will explore the challenges and strengths of siblings to individuals with ASD over the life span. We will share tips and resources for various developmental stages and how the relationship, and possible responsibilities, may change over time. Lurie Center for Autism presenters will include Todd Miller PhD, Susan Kessler MSW, LICSW, and Kirstin Birtwell PhD. Registration is required.

Lost and Found: Proactive Safety Strategies for Families with an Autistic Loved One

A loved one going missing is every family's worst nightmare—especially when the missing person is autistic and non-verbal. For a Boston-area family this alarming scenario became a reality recently, when a young autistic man became lost in the MBTA system after his iPad, his primary communication tool, ran out of battery. In this article, Lurie Center providers Nicole Simon and Julie O'Brien discuss what families can do to prepare for situations like this, including a variety of resources that are available to help ensure safety while promoting autonomy. Read the full article here.

Featured Research Study: Anxiety in Youth with Autism Spectrum Disorder

The Lurie Center for Autism is currently recruiting for a research study that will evaluate emotional and physical symptoms of anxiety in youth with autism spectrum disorder. The study is aimed at improving how anxiety is assessed in youth with ASD, by measuring heart rate, heart rhythm, and sweat in the lab and at home using a portable heart monitor and smart watch. Children, ages 7-17, diagnosed with ASD, both with and without anxiety, are encouraged to participate. One in-person visit is required in Lexington, MA and questionnaires may be completed remotely. Compensation up to $50 for study completion. Learn more.

View currently enrolling Lurie Center research studies.

Philanthropy

Philanthropy Spotlight: The Boston Marathon for Joey's Team

This year marked Mike Freni's 17th year running the Boston Marathon to raise funds for the Lurie Center for Autism as part of "Joey's Team," named in honor of his son.

"Joey has been a patient of the Lurie Center for Autism for over 16 years, and it has become an integral part of our family," said Mr. Freni. "After our initial encounter with the Lurie Center, we decided we wanted to do something to give back. The idea of participating in the marathon just popped into our heads."

Comprehensive Care Across the Lifespan

"Joey, who is non-verbal, relies on a tablet to communicate his needs and to request preferred food items." said Mr. Freni. The treatment plan developed in collaboration with the Lurie Center has guided Joey's care over the years. "Following his diagnosis, we turned to the Lurie Center for its comprehensive, multi-disciplinary approach," explained Mr. Freni. "At the center, we consulted with various specialists, from a gastroenterologist to a neurologist, who really helped us chart a path forward."

"Joey is now 18 and has benefited from the coordinated care and expertise provided by the center. Despite facing significant challenges, he continues to make incremental progress."

Meanwhile, as Joseph transitions into adulthood, the Freni family faces uncertainties about what the future holds. Services for adults can be hard to find, and they worry about how best to support Joey long term.

"We recently met with Julie O'Brien, a family-support clinician at the Lurie Center, because Joey just turned 18 and she's helping us navigate the transition to adult services. I can't tell you how much we love Julie and how wonderful she's been for us."

Paying it Forward

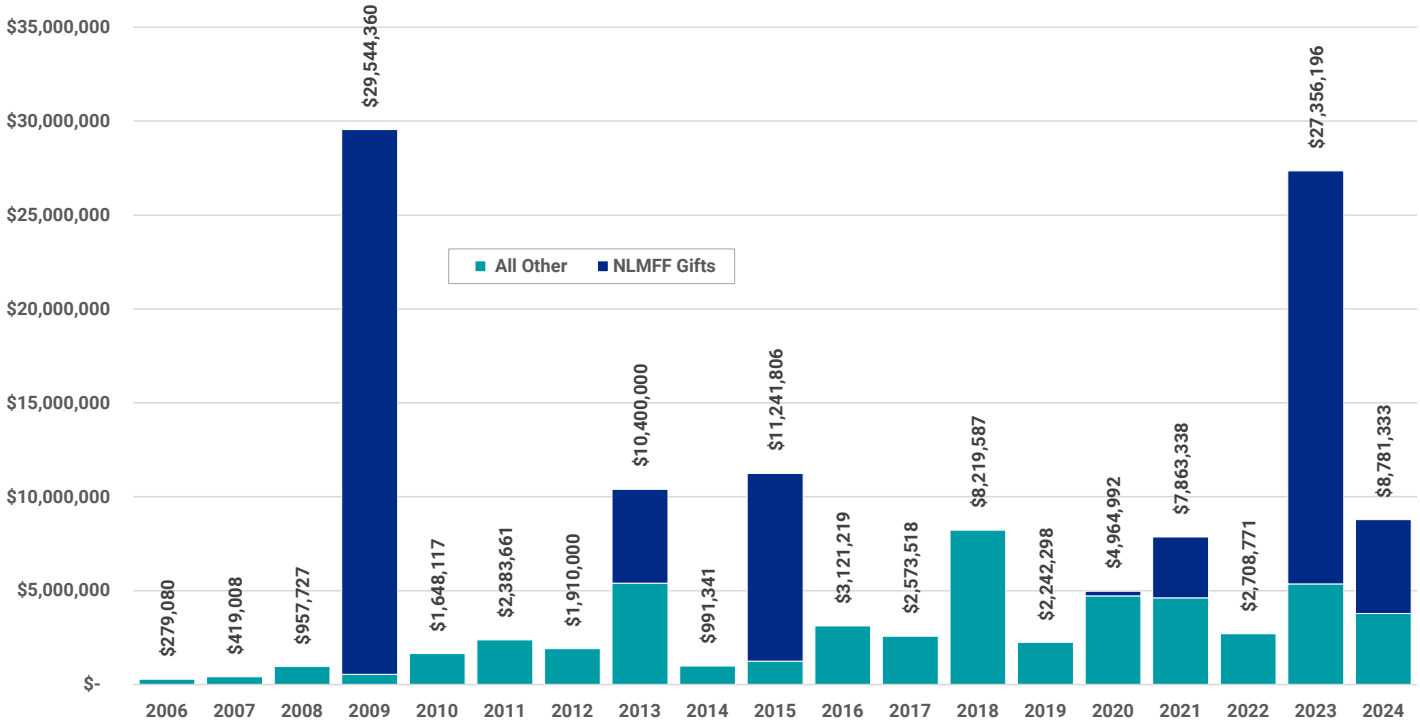
"The Boston Marathon for Joey's Team was actually my first road race," said Mr. Freni. What keeps him going through those grueling 26.2 miles? "I think about the families that don't have the resources we did….I think, hey, we raised $10,000 this year. How many visits is that…? It feels good to be able to pass it forward to other families."

Over the years, the Boston Marathon for Joey's Team has raised over $200,000 for the Lurie Center for Autism…so far. Mr. Freni remains resolute about participating in future marathons: "As long as my body holds up, I'm going to keep doing it."

Others Follow Where You Lead.

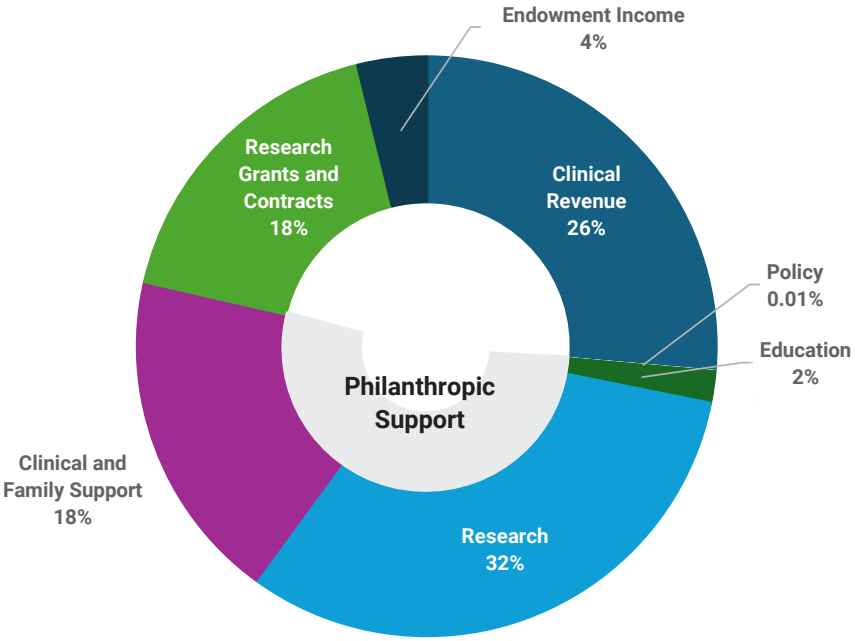
Since our founding as the Lurie Center for Autism, you've given crucial support toward patient care, training and educating the next generation of physicians and scientists and groundbreaking research — and the progress we've made has set us apart as a leader in multidisciplinary care across the lifespan.This success has had a multiplier effect and inspired others to give to the center.

Gifts to the Lurie Center (NLMFF and All Other) FY2006–2024



Financials

FY2024 Operational Income



FY2024 Operational Expenses