OUR MISSION:
The mission of the Johns Hopkins Institute for Brain Protection Sciences is to:
• provide the best possible health care in the areas of childhood developmental disorders, mental health, brain injury, rehabilitative care and pediatric neurological/neurosurgical diseases.
• improve all children’s health and quality of life by delivering an expeditious and comprehensive array of educational and therapeutic options in a patient family fashion.

OUR VISION:
The Institute for Brain Protection Sciences will raise the bar of knowledge and advance the field of pediatric neuroscience through research and innovations in clinical techniques, preventative services, technology and collaboration with others.
Welcome to the Institute for Brain Protection Sciences at a glance and annual report.

At no other time in history has the impact of medicine played such a critical role in our global existence. Here at Johns Hopkins All Children’s Hospital our focus is to provide the best pediatric medicine available. Our children, the generation of the future, deserve nothing less than our best. The care they receive today will determine how well they can live their tomorrows. We are dedicated to giving them the opportunity for their brightest tomorrow.

This institute was born out of a vision to develop comprehensive, multidisciplinary programs that would provide innovative, state-of-the-art care for all aspects of pediatric brain health. Whether it is treatment for brain tumors, traumatic brain injuries, concussions, epilepsy, autism, mental health disorders or other neurodevelopmental conditions, our specialists work as a team committed to offering family-centered, individualized care plans with a full range of inpatient and outpatient services.

Our approach unites clinicians, researchers and educators as we strive to push the boundaries in medicine. This is especially important now as we experience increases in youth mental health issues, the effects of the COVID-19 pandemic on our families, ground-breaking science in neuro-oncology, telemedicine and new surgical technologies. We must continue to advance, find new and better ways, collaborate without obstacles, and exceed the current standards of care—for all children regardless of socioeconomic background, race, ethnicity, religion or gender identity. I am proud to say that our team has done all of that and more this year. In the midst of unprecedented circumstances, we remain a pillar of strength, service and hope for the children and families of our community and abroad.

All we do. All for kids.

Sincerely,

George Jallo, M.D.
Vice Dean and Physician-in-Chief
Director, Institute for Brain Protection Sciences,
Johns Hopkins All Children’s Hospital
Professor of Neurosurgery, Oncology & Pediatrics
Johns Hopkins School of Medicine

WHEREVER THE ART OF MEDICINE IS LOVED, THERE IS ALSO A LOVE OF HUMANITY.
– Hippocrates
Patient Statistics

Clinic visits*  
Telehealth encounters
Inpatient admissions
Electroencephalograms (EEGs) (inpatient, outpatient)
Average length of stay (days)
Surgeries

Institute Metrics

Case mix index
Shunt infection rate
Number of 30 day readmissions
Number of fellows, residents and interns
Number of presentations by IBPS faculty
Percentage of physicians on hospital/institute councils
Number of international and out-of-state patients++

*Visits were negatively impacted by COVID-19 with a mandatory Safer at Home order from March–May 2020
++ Travel bans in place due to COVID-19

Total Clinic Visits: 22,001*

IBPS FY20 ANNUAL REPORT
Global Reach

Patients travelled from more than 18 states and 24 countries to receive care from our providers from 2016–2019.

Our international patient services department offers comprehensive care and a range of concierge services for our patients and their families travelling from around the world for care. These include language translational services, dietary accommodations, Child Life services, spiritual support and coordination of care.
The Numbers

11
New journal publications this year

25
Open research studies where we are the primary investigator, including ones focused on autism, anxiety, adjustment to diabetes, COVID-19-related impacts on practice and patients, traumatic brain injury/concussion, neuropsychological functioning, and many other areas.

38
Percentage point increase in volume during COVID-19 pandemic over the previous year

250+
Families served by an experienced educational advocate in a partnership with a local school system to provide education, community events and support services

400+
Law enforcement officers trained for encounters with people on the autism spectrum through a unique simulation program

2,500+
Telemedicine services visits during the COVID-19 pandemic for psychology, neuropsychology and psychiatry across the state

$500,000+
in additional donor funding

$1 million
Grant for mental health from the Johns Hopkins All Children’s Foundation Guild

Center for Behavioral Health

One would not have to look far to see an alarming trend of youth mental health crises in our nation. Our team of dedicated specialists continues to grow to meet this ever-increasing demand for specialized services.

Highlights

- Development of a streamlined Autism Clinic for faster access to diagnosis
- Offered Community Education Forums focused on Youth Mental Health issues, including school violence and suicide prevention
- Development of hospital-wide suicide risk screening protocol in progress in collaboration with Johns Hopkins Medicine in Baltimore.
- Added Psychiatry services to existing Psychology and Neuropsychology services at IMG Academy.
- Development of nationally disseminated telehealth procedures for neuropsychological testing.
- Successfully incorporated social work into Center for Behavioral Health team

“THIS IS NOT THE REAL WORLD. THINGS TOTALLY CHANGE WHEN YOUR KID HAS CANCER. IT’S NOT A NORMAL ENVIRONMENT. IT’S NOT EASY.”

— Shawna, whose family works with a psychologist embedded in the Cancer & Blood Disorders Institute
Neurology

As long as there are children who suffer with uncontrolled seizures, chronic headaches, limiting neuro-muscular conditions, or other complex neurological disorders we will continue to dedicate ourselves to their care. *U.S. News & World Report* ranks our Neurology and Neurosurgery programs #27 in the country among children’s hospitals for 2020–2021.

**Highlights**

- National Association of Epilepsy Centers (NAEC) Accredited Level IV Epilepsy Center
- Ketogenic Diet Clinic with personalized consultations and education by a specialized ketogenic dietitian
- Awarded a grant to distribute Ketogenic Diet Kits for patients during the COVID-19 pandemic to provide essential testing supplies
- Developed a pilot program for telemedicine before COVID-19, which was then expanded during the pandemic
- Created the neuro-hospitalist role, which allows effective transition of pediatric patients from the inpatient setting to outpatient care
- Established a monthly multidisciplinary epilepsy conference for review and collaboration of complex epilepsy surgical cases
- Participation and publication with research studies, including a collaborative multi-site Ketogenic Diet Study with Johns Hopkins in Baltimore
- Support of resident research projects and participation at the Joint 2020 International Child Neurology Congress & 49th Annual Child Neurology Society Meeting, October 2020

**The Numbers**

*Grant awarded to provide cross training of sleep technologists to EEG technologists*

$23,000

*TODAY IF YOU SEE JAYCE, YOU WOULD NEVER KNOW WHAT HE HAS BEEN THROUGH IN HIS SHORT LIFE. NONE OF THIS WOULD BE POSSIBLE WITHOUT THE HELP FROM THE DOCTORS AT JOHNS HOPKINS ALL CHILDREN’S HOSPITAL, THE SUPPORT FROM OUR FAMILY, AND ALL THE EFFORTS OF HIS TEACHERS AND THERAPISTS.*

— Taylor, whose son was treated for infantile spasms
Neurosurgery

Parents hope they will never need the services of a pediatric neurosurgeon, but for those children whose condition requires surgical intervention, our program offers world-renowned specialists in both brain and spinal cord treatments. U.S. News & World Report ranks our Neurology and Neurosurgery programs #27 in the country among children’s hospitals for 2020–2021.

The Numbers

7
Countries represented among neurosurgical patients this year

$224,000
Gift to fund a medulloblastoma research study

“GRACIE WENT FROM HAVING A BRAIN TUMOR TO DANCING AROUND. SHE CERTAINLY HAS LIVED UP TO HER NAME.”

— Allie, whose daughter had was treated by our neurosurgical team

Highlights

• Developed a shunt protocol which has reduced our annual infection rate to 1.37% (three-year average 2016–2019), far below the national average of 4–8%
• Created an ACPNF-accredited pediatric neurosurgery fellowship program
• Continued pediatric neurosurgery residency rotation with USF Morsani College of Medicine, as well as a shadow-observer program for pre-med and med students
• Livestreamed complex neurological surgery to the Masters of Neurosurgery Conference in London
• Participation in multi-site studies
• Launched a multidisciplinary clinic for spina bifida, and a skeletal dysplasia program where multiple specialists provide coordinated, collaborative care
Rehabilitation Medicine

Rehab Medicine plays an active role in both the hospital and outpatient settings. On the inpatient side, patients with rehab needs are seen in consultation to help coordinate their ongoing therapy programs.

In the clinic setting, Rehab Medicine focuses on children with special needs and various disabilities, especially cerebral palsy and spasticity, performing neurolytic procedures such as Botox injections.

Highlights

• Launched Spina Bifida multidisciplinary clinic with plans to expand in 2021
• Launched Skeletal Dysplasia program in January 2020
• Added new RN multidisciplinary care coordinator role

“EVAN HAD THE BEST OUTCOME—THERE’S NO NOTICEABLE TILT TO HIS HEAD NOW. HE’S A FUN-LOVING, ADVENTUROUS TODDLER. OUR SUCCESS IS DUE TO EARLY DIAGNOSIS AND THE CONTINUED SUPPORT OF THE TORTICOLLIS CLINIC TEAM—AND EVAN’S DETERMINATION TO GET THROUGH THIS WITH US.”

— Elizabeth, mother of a patient treated for torticollis

The Numbers

14 Patients seen in the Skeletal Dysplasia program
54 Patients seen since the Spina Bifida Clinic launched September 1, 2019
Our Sports Medicine team, made up of specialty physicians and certified athletic trainers, provide medical direction and support throughout the west coast of Florida. Our focus is on the care and treatment of youth athletes who have suffered concussion, acute injury and overuse injuries.

In addition to direct care, we provide consultation and medical direction to sports leagues while advocating for student athlete health. Through working with sports teams, leagues and school districts this advocacy has shaped return-to-play decisions related to concussion and infectious diseases including the COVID-19 pandemic.

**Highlights**

- Provide medical direction and onsite care for Lightning High School Hockey League, Clearwater Chargers Soccer Academy and Tampa Bay Youth Football League
- Provide onsite care for annual Run for All Children running event to support the hospital
- Served as on-site medical team for the World’s Strongest Man Competition

“CONCUSSION IS PROBABLY ONE OF THE LEADING CAUSES OF INJURY OR IMPAIRMENT IN ADOLESCENTS AND CHILDREN. IT’S VERY IMPORTANT FOR US TO DO A STUDY IN ADOLESCENTS BECAUSE THAT’S WHEN THEIR BRAIN IS DEVELOPING AND THAT’S WHEN THEY’RE GOING TO HAVE THESE HEAD INJURIES.”

— George Jallo, M.D., medical director of the Institute for Brain Protection Sciences on a concussion study by the Sports Medicine program
Jayce’s Journey

Read about Jayce’s fight to overcome epilepsy:
HopkinsAllChildrens.org/ACH-News/General-News/Overcoming-Epilepsy-Jayce’s-Journey
Community Education:

Hours 305
Served 748
Employees Involved 64

Student-Health Professionals Education:

Hours 321
Served 684
Employees Involved 51

Community Benefit Highlights

Physical Education:

Hours 61
Served 745
Employees Involved 9

Volunteer Community Involvement:

Hours 668
Served 432,880
Employees Involved 55
A young girl participates in an interactive exhibit on campus as part of Brain Health Awareness Month in April 2019.
A Special Thank You
To Our Generous Donors

In supporting our vision and passion for innovative pediatric brain health, scientific and academic advancements, and patient-family advocacy, these donors have enabled us to not only realize these accomplishments but also press ahead with our dreams for the future.

Supporters of the Institute for Brain Protection Sciences are an integral part of our mission to provide exceptional, personalized care and to find better ways to diagnose and treat our patients.

We are incredibly grateful for this year’s gifts totaling $2,213,038.78.

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CONTACT US

Email: ibps@jhmi.edu
Please do not share patient information through email.

Phone: 727-767-4879

Address: 600 Fifth Street S., St. Petersburg, FL 33701

HopkinsAllChildrens.org/Brain