Dear Colleague,

For over 75 years, Kennedy Krieger Institute has been a national leader in providing patient care for children and young adults with disorders and injuries of the brain, spinal cord, and musculoskeletal system. Our medical staff of more than 200 physicians, representing more than 50 specialties, and a support staff of more than 2,400 dedicated employees provide your patients unique access to the latest in research and treatment models in the areas of neurorehabilitation, behavioral disorders, and other developmental disorders.

To ensure that your patients receive the best care possible, we take an interdisciplinary team approach that starts with you, the referring physician. Our staff works closely with you and your patient’s family to develop a comprehensive and individualized treatment plan. Depending on their needs, we can offer your patients care in a variety of settings, including a 70-bed inpatient unit, outpatient programs that see more than 19,000 patients each year, day treatment services, and home- and community-based programs.

For your convenience and future reference, we’ve provided an overview of our programs and services as well as clinical and research updates. If you have any questions or would like to learn more about any of our patient care programs, please call our Physician Referral Line at 443-923-9403 or email us at findspecialist@kennedykrieger.org.

Sincerely,

Gary W. Goldstein, MD

PROGRAM NEWS & UPDATES:

- New Weight Management Program launched for children with developmental disorders
- Constraint-induced movement therapy helps children with hemiparesis
- Research Briefs: autism, language delay, and spinal cord injury
- Siblings of children with autism at higher risk than previously thought

INSIDE POTENTIAL MAGAZINE:

- Research Frontiers: low-cost cooling device aids in infant asphyxia in developing countries
- Transitioning to Adulthood: and the role clinicians can play
- Transverse Myelitis: activity-based restorative therapy for paralysis

Visit potentialmag.kennedykrieger.org to access articles and search publication archives.

REFERRING YOUR PATIENTS

To support the needs of physicians and healthcare professionals, our care management team is available to provide information on appropriate clinical programs, handle referrals, obtain consultations with Institute specialists, and schedule appointments for patients and families.

Call 443-923-9403 to reach our Physician Referral Line or visit referrals.kennedykrieger.org for information and resources for physicians and healthcare professionals.

For general information, call 1-888-554-2080.
Innovative Treatment Helps Children with Hemiparesis Strengthen Limbs

Kennedy Krieger Institute offers an innovative program for children with hemiplegia through our Constraint-Induced Movement Therapy (CIMT) program. CIMT is an evidence-based intensive therapy designed to help children with neurological problems affecting their arms and hands, such as cerebral palsy or a traumatic brain injury, regain use of a weakened limb.

For children with hemiparesis, sometimes the greatest barrier to their improvement is their higher functioning limb. To encourage use of the affected limb, the child’s functional limb is placed in a cast, and therapy is provided to promote function of the affected limb. This unique approach focuses on restraining the unaffected arm or leg, which forces the child to use the weaker one during a succession of kid-friendly and age-appropriate exercises. Specially trained occupational and physical therapists work with children and their families to create a treatment plan specific to the child’s individual developmental, motivational, and cultural needs.

The program offers multiple options for the convenience of patients and their families, including three- or six-hour sessions, five days a week, for five weeks. Additionally, caregivers can perform extensive home exercises daily as instructed by the therapists.

As an extension of the CIMT program, Kennedy Krieger offers a summer camp for children who may not have time to devote to an intensive therapy program during the school year. As in the regular program, children are casted and have small group therapy sessions.

For more information about this program and which children would be appropriate for this therapeutic intervention, please call 443-923-9403 or visit referrals.kennedykrieger.org.

New Vice President of Psychiatric Services and Research

Kennedy Krieger Institute is pleased to announce the addition of Robert Findling, MD, MBA, to its professional team of psychiatrists. Dr. Findling will be the vice president of Psychiatric Services and Research at Kennedy Krieger Institute, and the director of Child and Adolescent Psychiatry at The Johns Hopkins University.

Dr. Findling comes to Kennedy Krieger from Case Western Reserve University School of Medicine in Cleveland, Ohio, where his research focused on pediatric psychopharmacology, drug metabolism, and serious psychiatric disorders, while he attended to a robust clinical practice.

Dr. Findling will be working to develop the best academic program in child psychiatry by aligning the faculties, services, and research opportunities at Kennedy Krieger Institute, The Johns Hopkins Hospital, and the affiliated programs at Bayview Medical Center. He has already become an active member within the newly established Kennedy Krieger Clinical Trials Unit, and plans to see patients within the Psychiatry Clinic.

Dr. Findling, a native of New Rochelle, New York, earned an undergraduate degree in biology from The Johns Hopkins University and a medical degree from the Medical College of Virginia. He went on to complete a triple-board joint residency training program in pediatrics, psychiatry, and child and adolescent psychiatry at The Mt. Sinai Hospital in New York City, where he was also a chief resident. Findling recently earned an MBA through a joint program of the London School of Economics, New York University, and the prestigious École des Hautes Études Commerciales in Paris.

According to the Centers for Disease Control and Prevention (CDC), children with disabilities are 38 percent more likely to be obese than typically developing children. Many factors contribute to weight issues for children with developmental disorders, including a lack of exercise programs geared towards children with special needs, disorders that cause balance and gait issues, medication with side effects of weight gain, and poor sleep habits.

Kennedy Krieger Institute has expanded its nutrition program to include a clinic that addresses these issues head-on with the newly created Weight Management Program. The goal of the program is to provide patients and their caregivers the skills needed to help them develop healthy habits and behaviors, resulting in improved weight and decreased co-morbidities. The program also provides comprehensive nutrition education for overweight and obese patients and their families.

The interdisciplinary team is headed by a licensed dietitian. Each patient begins with a one-hour evaluation, and an individualized plan is developed with the patient and caregiver to meet a weight goal. Patients may also be referred to other services as needed. Each patient will have regular follow-up visits. For more information or to make a referral, please call our Physician Referral Line at 443-923-9403.
**Children with Autism Arrive at Emergency Rooms in Psychiatric Crisis Nine Times More than Peers**

In the first study to compare mental health–related emergency department (ED) visits between children with and without autism spectrum disorder (ASD), researchers at the Institute’s Center for Autism and Related Disorders found that ED visits are nine times more likely to be for psychiatric reasons if a child has an ASD diagnosis. Published in the journal *Pediatric Emergency Care*, the study found externalizing symptoms, such as severe behaviors tied to aggression, were the leading cause of ED visits among children with ASD.

**Speech Emerges in Children on the Autism Spectrum with Severe Language Delay at Greater Rate than Previously Thought**

New findings by the Center for Autism and Related Disorders at Kennedy Krieger Institute reveal that 70 percent of children with autism spectrum disorder (ASD) who have a history of severe language delay achieved phrase or fluent speech by age eight. This suggests that more children presenting with ASD and severe language delay at age four can be expected to make more notable language gains than was previously thought. Abnormalities in communication and language are a defining feature of ASD, yet prior research into the factors predicting the age and quality of speech attainment has been limited.

These findings reinforce that core abilities, such as nonverbal intelligence and social engagement, have a greater influence on the development of communication than other behaviors associated with ASD, such as repetitive and abnormal sensory behaviors.

**Lower Extremity Functional Electrical Stimulation Cycling Promotes Physical and Neurological Recovery in Chronic Spinal Cord Injury**

A new study by Kennedy Krieger Institute’s International Center for Spinal Cord Injury finds that long-term lower extremity functional electrical stimulation (FES) cycling, as part of a rehabilitation regimen, is associated with substantial improvements in individuals with chronic spinal cord injury (SCI). Improvements include neurological and functional gains, as well as enhanced physical health demonstrated by decreased fat, increased muscle mass, and improved lipid profile.

The results of this study support the hypothesis that activity-based restorative therapy (ABRT) can play an important role in promoting physical integrity and functional recovery, even when implemented years after an injury, and provide rationale for a large prospective randomized clinical trial to evaluate the efficacy of ABRT using FES in persons with chronic SCI.

**siblings of Children with Autism at Higher Risk than Previously Thought**

A recent study found that siblings of children with autism spectrum disorder (ASD) have close to a 1 in 5 chance (20 percent) of developing ASD. This is considerably higher than previous estimates of 3 to 10 percent, which were based on much smaller studies.

The researchers also found a higher rate of ASD among younger brothers (about 1 in 4, or 25 percent) than among younger sisters (about 1 in 9, or 11 percent). For infants with more than one sibling on the autism spectrum, the risk of developing ASD was even higher—about 1 in 3. Based on these findings, experts recommend that infant siblings of children with ASD be screened earlier and more often than children who are not at high risk.

The earliest signs of ASD can be detected in infants as young as six to fourteen months of age. The earlier these signs are detected, the more effective early intervention can be in improving lifelong learning, communication, and social skills.

“Recent research has changed the timeline of an autism diagnosis,” according to Dr. Rebecca Landa, director of the Center for Autism and Related Disorders at Kennedy Krieger. “Children who have an older sibling with an autism spectrum disorder should be monitored closely as early as 6 months. Even at that young age, interventions can change the trajectory of the disorder.”

Dr. Landa encourages physicians to share this information with their patients.
PATIENT CARE PROGRAMS & SERVICES

Inpatient Pediatric Units
Feeding Disorders Unit
Neurobehavioral Unit (NBU)
Rehabilitation Unit—Brain Injury, Pain Rehabilitation, Post-orthopedic Surgery, and Spinal Cord Injury

Outpatient Centers, Programs, and Services
International Adoption Clinic
Albright Clinic
Aquatic Therapy Program
Assistive Technology Clinic
Audiology Program
Center for Autism and Related Disorders
Barth Syndrome Clinic
Behavior Management Clinic
Bone Disorders Program
Botulinum Toxin Treatment Program
Brachial Plexus Clinic
Interdisciplinary Brain Injury Clinic
Brain Injury Program
Phelps Center for Cerebral Palsy and Neurodevelopmental Medicine
Child and Family Support Program
Child and Family Therapy Clinic
Community Rehabilitation Program
Constraint-Induced and Bimanual Therapy Program
Cranial Cervical Clinic
Deafness-Related Evaluations Clinic
Center for Development and Learning
Developmental Cognitive Neurology Clinic
Pediatric Developmental Disorders Clinic
Down Syndrome Clinic and Research Center
Family Center
Pediatric Feeding Disorders Program
Fetal Alcohol Spectrum Disorders Program
Focused Interdisciplinary Therapy Program
Fragile X Clinic
Healthy Lifestyles Therapy Program
Center for Holoprosencephaly and Related Malformations
Intrathecal Baclofen Program
Limb Difference Clinic

Military Behavioral Health Services
Movement Disorders Program
Center for Genetic Muscle Disorders
Neurobehavioral Outpatient Program
Neurology and Developmental Medicine Program
Neurology and Neurogenetics Clinic
Clinical Neurophysiology Clinic
Clinical Neurophysiology Laboratory
Neuropsychology and Developmental Outpatient Clinics
Neuropsychiatric Concussion Clinic
NICU Follow-up Clinic
Nutrition Clinic
Occupational Therapy Clinic
Orthopedic Clinic
Osteogenesis Imperfecta Clinic
Pediatric Pain Rehabilitation Program
Physical Therapy Clinic
Psychiatry Clinic
Pediatric Psychology and Consultation Clinic
Pediatric Rehabilitation Clinic
Seating Clinic
Sleep Disorders Clinic and Laboratory
Social Work Outpatient Mental Health Clinic
Specialized Transition Program (STP)
Speech and Language Clinic
Philip A. Keelty Center for Spina Bifida and Related Conditions
International Center for Spinal Cord Injury
Hunter Nelson Sturge-Weber Center
Tuberous Sclerosis Clinic
Weight Management Program*

Continuums of Care

Continuums allow patients to be seen through all stages of care, including 24-hour inpatient programs, day treatment, home- and community-based services, and outpatient programs. They include Pediatric Feeding Disorders, Neurobehavioral Disorders, and Pediatric Rehabilitation (brain injury, pain management, post-orthopedic surgery, spinal cord injury).

*Indicates new programs, clinics, and services.

For a complete listing of all diagnoses, disorders, programs, and services, visit kennedykrieger.org/patientcare or call 888-554-2080, TTY 443-923-2645, or Maryland Relay 711.