

Pediatric Neurology

More services to
assist more children

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PLUS Lawrence Hospital Affiliation **3** Pediatric Catheterization Lab **8** Pediatric Research **10**





A LETTER FROM JOHN SCHREIBER, MD

Dear Colleague,

Many of you have probably had the pleasure of working with one of our pediatric hospitalists—whether here at Floating Hospital for Children or at one of our community hospital partners.

As you know, our hospitalists are here to be a resource to you and your office as well as our patients and their families. What you may not know is that in addition to caring for patients, our hospitalists are actively engaged in research, teaching and quality initiatives to improve inpatient care here at Floating, at our affiliates, and across the country through our membership in the National Association of Children's Hospitals and Related Institutions (NACHRI). In this

edition of *Healthy Futures*, I wanted to highlight some of those initiatives:

- ▶ Our hospitalist program is participating in a national network called Value in Inpatient Pediatrics (VIP), a network that does quality research. Shortly we will begin participating in a collaboration that evaluates how well we conduct discharges and handoffs to benchmark ourselves against national best practices.
- ▶ On Floating Hospital's primary pediatric inpatient unit, our hospitalists lead safety rounds twice a month, in which a multi-disciplinary group meets with staff to talk in a proactive way about how to maintain and improve the safety environment. This practice has led to a number of initiatives to improve communications among patient care team members and promote our overall safety culture.
- ▶ We have invited the Institute for Safe Medication Practices to conduct a review of our medication practices in advance of the roll-out of our new computerized order entry system. We want to make sure we optimize current medication practices and incorporate best practices into our new system.
- ▶ We are implementing clinical pathways that are family-centered and evidence-based throughout Floating and across our community hospital partners. A great example is our asthma pathway. Many of Floating's asthma patients start out by being seen in a community hospital, may stay in our Pediatric Intensive Care Unit and then go to our general pediatric floor. Having a standard pathway across the entire Floating Hospital System is a great way to ensure patients are getting consistent care and education across these transitions. A major component of this program is education to help patients and their families better manage their asthma after they are discharged. We believe this initiative will result in safer, more consistent and efficient management of children with asthma all across our communities.

You can read about the success of our hospitalist program and our latest pediatric affiliation with Lawrence General Hospital in this edition of *Healthy Futures*. You can also read about our expanding Pediatric Neurology practice, our brand new Pediatric Cardiac Catheterization Lab and the exciting research being conducted by some of our new physician-scientists who are just embarking on their research careers.

And as always, please feel to reach out to me with your questions and ideas at jschreiber@tuftsmedicalcenter.org or 617-636-8031.

All the best,

John Schreiber, MD, MPH
*Pediatrician-in-Chief, Chief Administrative Officer
Floating Hospital for Children at Tufts Medical Center
Chairman, Department of Pediatrics
Tufts University School of Medicine*

*Cover photo: David Griesemer, MD, Director of
Pediatric Neurology, examines a young patient.
See story on page 4*

Floating Hospitalists at Lawrence General Hospital:

a winning combination for kids and pediatricians



What parent wouldn't want to keep their sick child close to home? Enabling hospitalized kids to stay near home whenever possible has been a major focus of Floating Hospital for Children's community hospitalist program, which now operates at five community hospitals throughout Eastern Massachusetts. Lawrence General Hospital, which began its affiliation with Floating Hospital in January, is already seeing the results: the transfer rate of its pediatric patients has been cut in half since the January launch.

"Our philosophy is to always put a child in the right place at the right time—in their own local community hospital when appropriate, or to bring them to the Floating if they do need tertiary care," says Dan Hale, MD, FAAP, who has led the Floating hospitalist program at Lawrence General since its inception in January.

Through the pediatric hospitalist program, a board-certified pediatrician is on-site at Lawrence General 24-hours a day, seven days a week, so an expert in the treatment of children is always available to make decisions about a child's care.

Hale says this availability makes an enormous difference to families, more of whom are now able to avoid the double stressors of having a sick child and having to drive into Boston for their child's hospital stay.

"The families display noticeable relief that a hospitalist—a pediatrician who specializes in inpatient medicine—will be here watching their kids 24 hours a day. They can be close to the child and won't have to arrange separate transportation and parking," Hale says. "And if the child's condition does change and gets worse, they know the hospitalist will be here to assess them and make a decision to transfer them if needed."

Hale recounts two instances where having a hospitalist available at Lawrence General made a significant difference in the care of



Dan Hale, MD, FAAP, Director of the Pediatric Hospitalist Program at Lawrence General Hospital, examines a young patient. Above right, Dr. Hale with staff and patients at the Pediatric Center at Lawrence General.

a pediatric patient. He recalls one instance in which a child had an asthma exacerbation and needed oxygen and nebulized medicine right away. In the past, that child might have been sent to Boston, but the hospitalist was able to treat him on site.

"The child's family was very happy with the care, it saved a transport, and we helped improve the child's overall asthma management because we now have an asthma management education program for children," something that has been developed since January, Hale says.

In another case, a six-year-old boy came to the ED with a deep-tissue neck infection and sepsis. After examining the child, the hospitalist felt he needed services that included long-term antibiotics and an otolaryngology consult that would be best administered at Floating Hospital. Seamless transport was arranged to Boston since Hale and his hospitalists are part of the same team of physicians who manage patients at the Floating Hospital.

Of course, the hospitalists from Floating Hospital are a resource not only to families and kids, but to referring physicians. Hale, who came to Floating Hospital and Lawrence General from Central Maine Medical Center in Lewiston and the Barbara Bush Children's Hospital at Maine Medical Center in Portland, says he has enjoyed meeting many referring physicians at their practices and has fine-tuned the hospitalist program to meet their needs. The hospitalists communicate by fax and phone with the pediatrician's office of every child admitted to Lawrence General. Soon a subspecialty clinic will open adjacent to the hospital allowing parents who need ambulatory appointments with a pediatric specialist to stay right in Lawrence. This will further enhance the service the Floating Hospital team can provide to the referring physicians and their families.

"It's great to see different practices to put faces to the names of the people we are calling," Hale says. "Pediatricians know we're just an extension of their office." □



Pediatric Neurology

More services to assist more children

Floating Hospital's Pediatric Neurology team stands ready to diagnose and treat a wide variety of neurological disorders experienced by children.

Clockwise from bottom left: Tomo Tarui, MD, Director of Fetal-Neonatal Neurology; Ju Tang, MD, PhD, Director of the Pediatric EEG Laboratory; Neel Madan, MD, Pediatric Radiologist; Douglas Hyder, MD, Director, Ambulatory Pediatric Neurology; Dimitrios Arkilo, MD, Pediatric Neurology Fellow; Anthony Rodrigues, MD, Pediatric Neurology Fellow; Kristen Padulsky, CPNP, Nurse Practitioner in Pediatric Neurology. Center: David Griesemer, MD, Director of Pediatric Neurology

The Pediatric Neurology Division at Floating Hospital for Children has grown considerably in its offerings and staff since David Griesemer, MD became the division's chief just over a year ago. In that year, Griesemer has recruited new faculty, established outreach clinics in two—soon to be four—community locations, and made care more accessible with service enhancements that enable patients to be seen more quickly.

The impetus for all these changes is simple. “We genuinely share the referring physicians’ commitment to serve their patients,” Griesemer says. “We want to provide them with best possible service and coordination of care that we can.”

The ability to fulfill that commitment has been strengthened with the recent recruitment of three new faculty members.

“Doug Hyder, MD comes to us from Dartmouth Hitchcock Medical Center. He is taking the lead role for ambulatory neuropsychiatry and making our community outreach as efficient as possible,” Griesemer says. “He’s also a tremendously enthusiastic teacher and has assumed responsibility for teaching the medical students who rotate through our service each month.”

“This is an exciting time to be at Floating Hospital,” Hyder says. “There’s a real focus on teamwork, both with referring providers and within our division.”

Tomo Tarui, MD was recruited from Children’s Hospital Boston where he completed advanced training in fetal-neonatal neurology.

“Tomo Tarui will really develop our fetal-neonatal neurology program, bringing his expertise and interest in neuro-imaging as well as his research focus on fetal brain development,” Griesemer says (see story on page 10 for more on Tarui’s research). “He’s also counseling parents when we find a fetal brain abnormality. This is something we didn’t do in Pediatric Neurology before and Tomo will make us a leader in this area.”

“We try to be proactive during the fetal period,” Tarui says. “Even though sometimes we must give parents a serious message regarding potential cognitive impairment, it’s better than getting no information or poor information and swinging between hope and desperation. Once they know the facts, they can make the most appropriate decisions about their child’s care. We also provide neurological management in the Neonatal Intensive Care Unit, which is critical for babies who suffer from neurological problems such as seizures, brain malformations or genetic abnormalities in their earliest life. After these babies go home, we will follow them at our clinic to closely watch their development and manage any ongoing neurological problems.”

The third new subspecialist to join the Pediatric Neurology faculty is Ju Tang, MD, PhD, who is responsible for the pediatric EEG lab, video EEG monitoring and growing Floating Hospital’s respected pediatric epilepsy program.

“There are many aspects to building this program, and we’ve moved on several fronts to improve seizure management,” Griesemer says. “We’re involved in clinical trials of new medications, we’ve hired a nutritionist to help get patients started on a ketogenic diet (a special high-fat, low-carbohydrate diet that helps to control seizures in some people with epilepsy), and we’ve ramped up our capability to implant and monitor vagus nerve stimulators. In addition, Floating Hospital has hired a second pediatric neurosurgeon, Steven Hwang, who expands our capabilities for epilepsy surgery.”

The division’s talent also includes neuropsychologist Samuel Sokol, PhD, pediatric nurse practitioner Kristen Padulsky, CPNP and five pediatric neurology fellows.

“Plus, although not an official member of our division, Neel Madan, MD is a pediatric neuroradiologist who joined the Floating’s Radiology faculty around the same time I began at Floating,” Griesemer says. “A day never goes by that we don’t work with him, and having his expertise is a tremendous asset.” The Pediatric Neurology division also has close, collaborative relationships with subspecialists in Floating Hospital’s Children’s

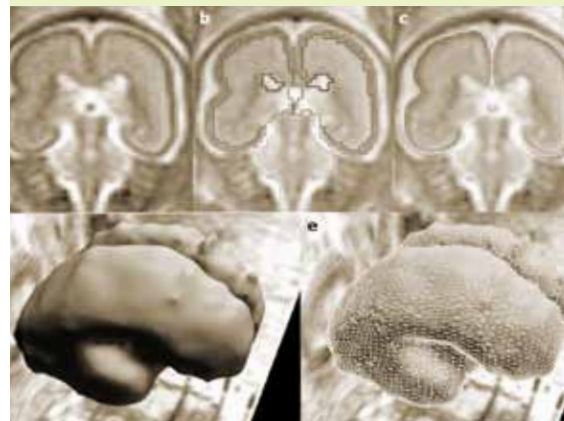
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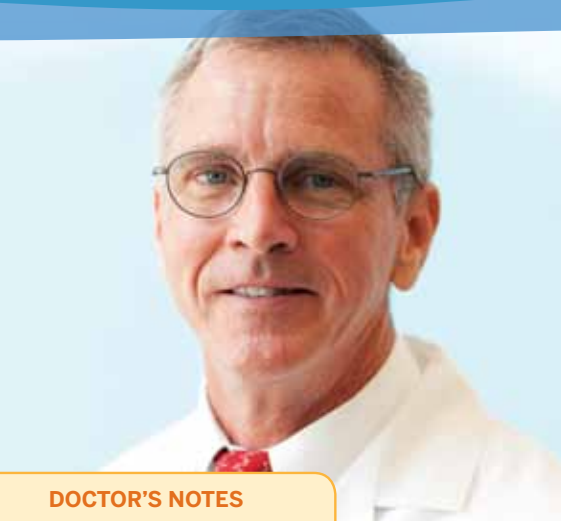
Robust Clinical Capabilities

The Pediatric Neurology Division at Floating Hospital offers a robust depth and breadth of subspecialty expertise for diagnosing and treating the full range of childhood neurologic disorders, including:

- Seizure disorders and epilepsy
- Concussion and traumatic brain injury
- Cognition, communication and behavior disorders
- Neonatal neurology
- Headache and pain syndromes
- Neuromuscular disorders
- Sleep and regulation disorders

The division works in close collaboration with other Floating Hospital subspecialists, including those in pediatric neurosurgery, genetics, the Center for Children with Special Needs (developmental and behavioral pediatrics), neonatology, neuroradiology and neuropsychology—as well as the referring physician—ensuring a comprehensive, multi-disciplinary and inclusive approach to care.





DOCTOR'S NOTES

DAVID GRIESEMER, MD

Chief, Pediatric Neurology
Professor, Tufts University School of Medicine

Medical School

Johns Hopkins University

Postgraduate Training

Johns Hopkins Hospital; University
of Michigan Hospitals

Board Certification

Child Neurology

Clinical Specialties

Seizures and epilepsy, neurobehavioral
disorders, and traumatic brain injury

Challenging Cases Are Our Specialty

Clinically dehydrated after nearly 10 days of vomiting and diarrhea, this six-week-old patient was transferred to Floating Hospital from another hospital. On evaluation, the infant was found to have an infection in his bloodstream and he was treated with IV antibiotics. On his last day of treatment, however, he had a seizure lasting nearly two minutes, during which he was shaking in both arms and his eyes were deviated to the right.

“We were called emergently to evaluate him,” recalls Dimitrios Arkilo, MD, Pediatric Neurology fellow with a special clinical interest in epilepsy. “As part of the workup, he had an EEG that showed possible epileptogenic foci, as well as an MRI/MR angiogram and MR venogram of the brain. The MRV showed large sinus thrombosis involving the superior sagittal sinus and straight sinus.” Clotting of blood in the large veins that drain the brain is a relatively rare condition that occurs in fewer than seven in a million children.

“We started the patient on antiepileptic medication as well as blood-thinning medication,” Arkilo continues. “On follow-up imaging, his sinus thrombosis had cleared. And he had no further seizures. Now, at nine months of age, he is off all medication, is developmentally appropriate, had a normal exam and we discharged him from our clinic.”

“This patient was initially referred to Floating Hospital due to the complexity of his infection,” Arkilo says. “But pediatric epilepsy specialists are hard to find and we have two of them. Also, we are one of the few hospitals with a pediatric neuroradiologist able to read MRIs of infants with blood clots in the brain. Furthermore, this patient required continuous EEG, and only a handful of hospitals in Massachusetts have this capability for infants. This young patient definitely was brought to the right place.”

Cancer Center, Muscular Dystrophy Association Clinic, Neurosurgery and Physical Medicine & Rehabilitation programs.

With new staff in place, the division is an integral part of Floating Hospital’s robust Distributed Academic Medical Center™ model that makes advanced care more accessible in the community setting. One of Griesemer’s goals is to expand the availability of the hospital’s pediatric EEG epilepsy resources outside Boston.

“We’re now able to see patients at MetroWest Medical Center in Framingham and Lowell General Hospital in North Chelmsford, and will soon be at Lawrence General Hospital,” Griesemer says.

“We’re also starting a neurology clinic at the Walker School in Needham, a residential psychiatric facility for children and adolescents.”

Access to services at Floating Hospital also has been enhanced with the addition of evening clinic hours and three daily slots on the schedule reserved for urgent appointments.

“If a pediatrician is concerned about getting a patient seen quickly, we can schedule that patient into one of these urgent slots,” Griesemer says. “There’s no reason why important issues should wait.”

While he’s achieved a great deal in the past year, Griesemer is nowhere near finished.

“I came to Floating Hospital not only to expand the Pediatric Neurology clinical service but also to rebuild the training program which had a reputation as one of the best in the country,” he says. “We’d like to introduce and fund a research year as part of the five-year curriculum to train pediatric neurologists, and we plan to do some serious fundraising in order to put that year in place,” he says. “We have a superb group of clinicians and tremendous support from neuroscientists at Tufts University, so we have the opportunity to turn out awesome doctors who will move this field forward,” he adds.

In the meantime, delivering outstanding clinical care and exceptionally responsive service remains the top priority of the entire division (see story above for an example of the types of complex cases that the Pediatric Neurology team is equipped to handle). And Griesemer remains as enthusiastic about Floating Hospital’s ability to meet the needs of young patients, their families and their referring physicians as he was when he arrived a year ago.

“The honeymoon isn’t over,” he says. “Everything here has been as good as I initially thought it was. Everyone is as patient-focused and service-oriented, as collegial and cooperative as I’ve seen anywhere. It’s just a wonderful place to work.” □

To refer a patient to Floating Hospital for Children’s Department of Neurology, please call 617-636-8100.

WORKING TOGETHER

Real experiences from our referring physicians

Kenny Chan, MD

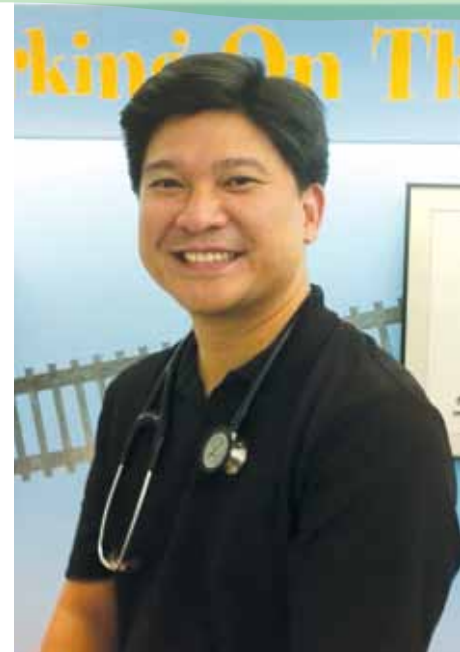
When Kenny Chan, MD did his residency at Floating Hospital for Children from 1996 to 2000 (he was Chief Pediatric Resident from 1999 to 2000), Floating was in flux, with changes occurring in many departments.

With Floating Hospital attracting talented physicians from the top children's hospitals around the country, Chan said he now refers patients to some of the physicians he trained under as well as the newer physicians who have strengthened and grown Floating's departments.

"I'm happy to say they've made huge comebacks with very strong departments that we're getting to know, and we're very pleased as community pediatricians," said Chan, who is a pediatrician at Andover Pediatrics, a five-physician, three-nurse-practitioner practice north of Boston. A resident from Floating Hospital also works with the practice once a week.

Chan is also Chief of Pediatrics at Lawrence General Hospital, which now has a pediatric affiliation with Floating Hospital for Children. Chan says he has been pleased with how well Floating's pediatric hospitalist program is improving inpatient care for children seen at Lawrence General.

"They've gained our trust, and we feel that overall health care is improved," he says. "More of our care is being managed locally, and it is also a comfort knowing that if patients do become more ill, excellent care is just a skip away." (For more on Floating Hospital's affiliation with Lawrence General, turn to page 3.)



To refer patients to Floating Hospital for Children at Tufts Medical Center, call 877-KIDS-FHC (877-543-7342)

For the Pediatric Specialty Center closest to you, call 617-636-8100.

As a physician for the public schools of Andover and North Andover, Chan says he has also consulted with Floating Hospital experts on a number of public health issues, such as screenings for young athletes.

"It's become apparent by meeting many of these doctors personally or talking to them on the phone that the expertise is there and the accessibility is there," Chan says. "Certainly we have confidence in Floating Hospital as a top-notch tertiary care center. □

HAVE A STORY TO TELL US?

At Floating Hospital for Children, we value our referring physician partners and are committed to doing all we can to make it easy for you to refer your patients here. It is our mission to ensure that they, and you, have a positive experience during the entire referral process. **If you have a story to tell about your experience with Floating Hospital, please contact us at healthyfutures@tuftsmedicalcenter.org. We would love to include it in a future Working Together column.**



Michael de Moor, MD, Chief of Pediatric Cardiology and Director of Pediatric Cardiac Catheterizations and Interventions, performs a catheterization on a pediatric patient in Floating Hospital's new catheterization lab.

NEW FLOATING HOSPITAL Cardiac Catheterization Suite:

repairing hearts
with the latest technology



The technology available to interventionalists is improving all the time, and we are increasing the number of percutaneous procedures we can perform via catheterization”

—Michael de Moor, MD, FACC, FSCAI

MINIMALLY INVASIVE PERCUTANEOUS TRANSCATHETER TECHNIQUES in the cardiac catheterization suite are often the best option for treating patients with congenital heart defects. At Floating Hospital for Children's new, state-of-the-art Cardiac Catheterization Suite, congenital heart disease interventionalists now have a powerful new tool with which to visualize and access the blood vessels and hearts of our most complex and sometimes smallest, cardiac patients.

The newly renovated suite is outfitted with Toshiba's Infinix™ CF-i bi-plane cardiovascular system. The Infinix system can provide cardiologists with multiple X-ray images of the same location while exposing patients to the minimal level of radiation possible.

“This new system allows revolutionary access to the patient during the procedure,” says de Moor. A new table that can tilt from side to side and up and down also makes it easier for surgeons to access the anatomy of patients. These capabilities will be important as Floating Hospital begins to offer hybrid procedures, which involve both catheterization and open-heart surgery. Plans to offer this service are currently being developed.

Developing the new suite has been a top priority of Michael de Moor, MD, Chief of Pediatric Cardiology at Floating Hospital. As one of only two hospitals in Massachusetts that have catheterization labs designed specifically for children and patients with congenital heart disease, de Moor said Floating Hospital recognizes its critical role in treating children with cardiovascular defects.

“The technology available to interventionalists is improving all the time, and we are increasing the number of percutaneous procedures we can perform via catheterization,” he says. Cardiac catheterization is frequently used for the closure of atrial and ventricular and septal defects, balloon dilatation of aortic and pulmonary stenosis, the closure of patent ductus arteriosus, stent of aortic coarctation and pulmonary artery stenosis. It is now possible to actually replace some valves using minimally invasive percutaneous transcatheter procedures. “Our new cath lab will enable us to help even more patients more efficiently,” de Moor says.

The new suite was highlighted as part of the 15th Pediatric Interventional Cardiac Symposium/Adult Interventional Cardiac Symposium held in Boston at the end of July. Floating Hospital was one of five hospitals internationally that broadcast cases from cardiac catheterization suites across the globe and the only one in

Boston. Three procedures performed at the Floating were broadcast for the 800 attendees of the conference.

“The broadcast was wonderful because it gave us the opportunity to demonstrate our expertise and help educate our physician colleagues around the world in the very latest techniques using the newest equipment,” de Moor says.

The renovation of the suite and the installation of the new equipment is part of an overall renovation of the Pediatric Cardiology patient areas. The brightly-painted walls are graced by original artwork donated by a number of area artists. Not only does the space look appealing, de Moor says that the close proximity of all the areas needed for patients who are undergoing cardiac investigations (ECG, Echo, Exercise, Cath, etc) is very convenient and also comforting to families. The waiting room, offices, Echo, Exercise and ECG suites, as well as the Cardiac Catheterization Suite, are on the same floor in the same collocated area on Floating 3. The Pediatric Intensive Care Unit and the operating room are in the same wing, just a quick elevator ride away—parents and families don’t need to navigate from building to building or wing to wing. “Everything is right here, and that’s unique,” de Moor says. “This allows us to offer our patients boutique-type medicine.” □



**MICHAEL DE MOOR, MD,
FACC, FSCAI**

Chief, Pediatric Cardiology;
Director, Pediatric Cardiac
Catheterizations and Interventions

Medical School

University of Witwatersrand,
Johannesburg, South Africa

Postgraduate Training

Red Cross Children’s Hospital,
Cape Town, South Africa

Clinical Specialties

Pediatric cardiology, interventional
cardiology, adult congenital heart
disease

*Fellow of the American College
of Cardiology*

*Fellow of the Society of Cardiac
Angiography and Interventions*

DOCTOR’S NOTES

To refer a patient to Floating
Hospital for Children’s Division
of Pediatric Cardiology,
please call 617-636-7435.

*Staff in Floating
Hospital’s new cath-
eterization lab assist
Michael de Moor,
MD, Chief of Pediatric
Catheterizations and
Interventions, as he
performs a catheter-
ization procedure on
a pediatric patient.*





SINCE ITS DAYS AS A HOSPITAL SHIP IN BOSTON HARBOR, Floating Hospital has attracted physicians who are committed to researching pediatric illness and treatments. Today, that commitment to research is more significant than ever, and like our patients, it continues to grow. Floating Hospital has been attracting more researchers at the beginning of their careers; the four researchers highlighted below demonstrate the depth and breadth of the work being done and the great potential ahead.

Pediatric Research: A New Wave of Physician-Scientists Breaks New Ground

Sarbattama Sen, MD, studies the impact of maternal obesity on fetal and maternal health.

Tomo Tarui, MD

Director, Fetal-Neonatal Neurology

Tomo Tarui, MD, focuses on ways to more accurately detect early abnormalities in fetal brain development using quantitative fetal brain MRI analysis. His work is funded by an American Academy of Neurology clinical research training fellowship and two private foundations: the Baby Alex Foundation (started by the parents of a child who suffered neonatal brain injury) and the William Randolph Hearst Foundation.

Tarui is “very excited” to be joining the lab of his research mentor Diana Bianchi, MD, Vice Chair for Research and Academic Affairs and head of the Mother Infant Research Institute (MIRI) at Floating Hospital. He will also continue a collaboration begun three years ago with a radiologist from Children’s Hospital Boston for his fetal neuroimaging research.

“So many diseases have their origin in the fetal and perinatal periods and can affect the baby’s brain development,” Tarui explains. “This is a big public health issue and we hope to provide new insight into the evolution of brain pathology,” he says of his work.

“Today we can study details of the developing brain using fetal brain MRI analysis,” he continues. “When we detect an abnormality,

we can work with the obstetrician to see if we can intervene when the brain is actively developing under the influence of pathology, in order to give the baby a head start. And such knowledge should be passed to the neonatologist and primary care pediatrician so it can help to ensure continuous, seamless care for the baby with neurodevelopmental injury. I myself, as a pediatric neurologist, can follow up continuously after birth to provide continuous support.”

Michael Kelly, MD, MPH

Pediatric Hematology/Oncology

Michael Kelly, MD, MPH, currently has two projects underway to help physicians determine the best treatments and outcomes for children with pediatric leukemia. He was one of two Floating Hospital researchers to be awarded a Career Development Award (K11) in Comparative Effectiveness Research given by the Tufts Clinical and Translational Science Institute (CTSI) last year in support of his work, which he is conducting in collaboration with his research mentor, pediatric hematologist/oncologist Susan Parsons, MD.

“There is a subset of kids with acute myeloid leukemia (AML) who, based on cytogenetics, are considered favorable, intermediate

or poor risk for how we treat this disease, which is either with bone marrow transplantation (BMT) or chemotherapy," Kelly explains. "There was a big study published several years ago that showed patients with favorable risk did well with either treatment and, in those with intermediate risk, BMT was slightly better. But the number of patients in the poor-risk category was too small to yield any meaningful information."

"We have international data on several hundred pediatric poor risk AML patients who have been treated with either BMT or chemotherapy over the past 15 years, so we're currently doing an analysis to compare treatment outcomes among those who received BMT vs. chemotherapy," he notes.

Kelly's second project focuses on acute lymphoblastic leukemia (ALL). "When patients relapse, it can occur in either bone marrow or the central nervous system," he explains. "Historically, patients with a central nervous system relapse have been given prophylactic cranial radiation; it provides protection against central nervous system relapse but puts children at higher risk of secondary malignancies and learning disabilities. Today, there's a wide variation in treatment approaches, and it's hard for the clinicians to decide what's the optimal treatment. So we're conducting a systematic review of the literature and doing a meta-analysis of survival and outcomes

in specifically T-cell patients who've received prophylactic radiation compared to those who did not."

"Both these studies will yield legitimate information regarding the optimal treatment for these patients and address real-life problems in clinical practice," Kelly adds.

JoAnna Leyenaar, MD, MPH *Pediatric Hospitalist*

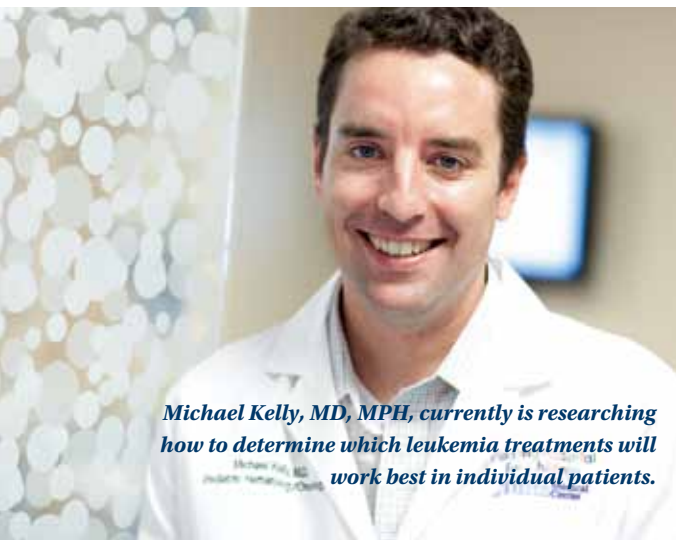
JoAnna Leyenaar, MD, MPH, one of Floating's community hospitalists, is the second Floating Hospital researcher granted a KMI Award from the CTSI last year. Her comparative effectiveness research is looking at community acquired pneumonia (CAP) in previously healthy children admitted to hospitals in the United States.

"CAP is the most common cause of hospitalization in this country, yet there is little research about which treatment is most effective for management," she explains. "At this point, we know there is a lot of variability in how pediatricians manage pneumonia in kids admitted to the hospital, but we don't know if there's one optimal way these patients can and should be managed. Our research will help inform this, optimize the care we provide, reduce length of stay, reduce the readmission rate and, ultimately, bring down associated costs."

Leyenaar is working with her research mentor at Baystate Medical Center, which has access to a large administrative database with information about pediatric CAP hospitalizations at almost 400 institutions throughout the United States. Her research will be critical as Floating Hospital applies evidence based therapies across its community hospital system to reduce variation in care and to improve clinical outcomes of treatment of children with pneumonia.



Tomo Tarui, MD, Director of Fetal-Neonatal Neurology, is using MRI to detect abnormalities in fetal brain development.



Michael Kelly, MD, MPH, currently is researching how to determine which leukemia treatments will work best in individual patients.

Sarbattama Sen, MD *Neonatologist*

Sarbattama Sen, MD, is studying the impact of maternal obesity on both maternal and neonatal health, specifically with regard to the increased risk of developing inflammatory diseases such as asthma. She has received multiple grants for her work at the Mother Infant Research Institute (MIRI) at Floating Hospital, the only research institute in the United States that combines pediatrics and obstetrics to investigate the events that occur during pregnancy and their impact on transgenerational health.

"We're seeing significant immune system impairment in obese women, and we're looking at how this affects babies as they grow," Sen says. "What we're seeing is that children born to obese mothers are more prone to asthma, eczema and dysregulation of their immune system. More than half of reproductive-age women are obese or overweight, so we've just begun to see the effects of this medical problem. It's the tip of the iceberg of what we understand."

"It underscores the very interconnected nature of maternal-child health, and how when the mother is obese, it has profound ramifications on the child," she adds. "As these children grow, we hope to understand in more detail how maternal obesity during pregnancy affects various aspects of the child's health." □

MEET OUR New Physicians



FLOATING HOSPITAL FOR CHILDREN AT TUFTS MEDICAL CENTER is constantly adding talented new specialists to meet your needs and the needs of your patients. Please contact any of these recently hired physicians for a consultation or to schedule an appointment for your patients at **617-636-8100.**

ENDOCRINOLOGY



SANJAY BANSAL, MD

Pediatric Endocrinologist

Medical School: St. George's University School of Medicine, Grenada, West Indies

Postgraduate Training: Children's Hospital at Albany Medical Center; University Hospital of Stony Brook;

Children's Hospital of Pittsburgh

Board Certification(s): Pediatrics

Clinical Specialties: Pediatric endocrinology, diabetes



GENERAL PEDIATRICS AND ADOLESCENT MEDICINE

ATHENA XIFARAS, MD

Pediatrician

Medical School: University of Massachusetts Medical School

Postgraduate Training: Floating Hospital for Children at Tufts Medical Center

Board Certification(s): Pediatrics

Clinical Specialties: Inpatient pediatrics, pediatric obesity and preventative medicine, hospitalist medicine

HEATHER MCKEAG, MD

Pediatrician

Medical School: Indiana University School of Medicine

Postgraduate Training: Children's Hospital and Research Center, Oakland; Children's Hospital of Philadelphia

Board Certification: Pediatrics

Clinical Specialties: General pediatrics, child abuse

GENETICS



STACI KALLISH, DO

Clinical and Biochemical Geneticist

Medical School: School of Osteopathic Medicine, University of Medicine and Dentistry of New Jersey

Postgraduate Training: Cooper University Hospital; Children's Hospital of Philadelphia

Board Certification(s): Pediatrics

Clinical Specialties: Inborn errors of metabolism, connective tissue disorders, clinical genetics, lysosomal storage diseases

NEPHROLOGY

NICOLE RANDAZZO, MD, MA

Pediatric Nephrologist; Pediatric Hospitalist

Medical School: SUNY Downstate

Postgraduate Training: Mount Sinai School of Medicine

Board Certification: Pediatrics, Pediatric Nephrology

Clinical Specialties: Hospitalist medicine, pediatric nephrology

NEUROLOGY



TOMO TARUI, MD

*Director, Fetal-Neonatal Neurology;
Pediatric Neurologist*

Medical School: Keio University School of Medicine, Japan

Post graduate Training: Infants and Children's

Hospital, Maimonides Medical Center; Children's Hospital, Boston; Harvard Medical School

Board Certification(s): Pediatrics, Neurology (with Special Qualification in Child Neurology)

Clinical Specialties: Pediatric neurology, fetal neurology, neonatal neurology, neurological intensive care: fetal neurology counseling (postconception, preconception, interconception), hypoxic ischemic encephalopathy, intraventricular hemorrhage, encephalopathy of prematurity, neonatal seizure, congenital brain malformation, neurogenetics, neurometabolic disorders, developmental delay

Foreign Language: Japanese



DOUGLAS HYDER, MD

Director of Ambulatory Pediatric Neurology

Medical School: University of Chicago Pritzker School of Medicine

Post graduate Training: University of Chicago; Children's Hospital of Philadelphia

Board Certification: Neurology (with Special Qualification in Child Neurology)

Clinical Specialties: General pediatric neurology, neuro-oncology, headaches

NEWBORN MEDICINE

GINA GEIS, MD

Neonatologist

Medical School: Albany Medical College

Postgraduate Training: University of North Carolina at Chapel Hill

Board Certification(s): Pediatrics

Clinical Specialties: Neonatal-perinatal medicine



JENNIFER LEE, MD

Neonatologist

Medical School: University of Vermont College of Medicine

Postgraduate Training: Tufts Medical Center

Board Certification(s): Pediatrics

Clinical Specialties: Neonatology

FRANCHEYSKA SILFA MAZARA, MD

Neonatologist

Medical School: Instituto Tecnológico de Santo Domingo, Dominican Republic

Postgraduate Training: Marshfield Clinic, Saint Joseph's Childrens Hospital; Tufts Medical Center

Board Certification: Pediatrics

Clinical Specialties: Neonatology, newborn medicine

Foreign Language: Spanish

Floating Hospital for Children and its community affiliates are also pleased to welcome the following hospitalists:

MEGAN CARDOSO, MD

Pediatric Hospitalist, MetroWest Medical Center

Medical School: The George Washington University of Medicine and Health Sciences

Postgraduate Training: Floating Hospital for Children at Tufts Medical Center

ESTELLA ESCOBAR, MD

Pediatric Hospitalist, Lawrence General Hospital

Medical School: Universidad Pontificia Bolivariana, Medellin, Columbia

Postgraduate Training: Miami Children's Hospital; Boston University Medical Center

DAN HALE, MD

Pediatric Hospitalist; Director of the Pediatric Hospitalist Program at Lawrence General Hospital

Medical School: University of Wisconsin Medical School

Postgraduate Training: Barbara Bush Children's Hospital at Maine Medical Center

MELISSA MAURO-SMALL, MD

Pediatric Hospitalist, Morton Hospital and Medical Center

Medical School: Boston University School of Medicine

Postgraduate Training: St. Christopher's Hospital for Children

AMY MOLTEN, MD, FAAP

Pediatric Hospitalist, Lowell General Hospital

Medical School: University of Vermont College of Medicine

Postgraduate Training: Yale New Haven Children's Hospital

TAINA TREVINO, MD

Pediatric Hospitalist, Lawrence General Hospital

Medical School: Ponce School of Medicine, Puerto Rico

Postgraduate Training: Floating Hospital for Children at Tufts Medical Center □

Health Sheet



DOCTOR'S NOTES

Kristen Padulsky, CPNP and Douglas Hyder, MD, are two of Floating Hospital for Children's pediatric neurology specialists who have a particular focus on headaches:

KRISTEN PADULSKY, CPNP

Pediatric Nurse Practitioner,
Division of Pediatric Neurology

Post-graduate Training

Boston College Graduate School
of Nursing

Clinical Specialties

General pediatric neurology,
headaches

DOUGLAS HYDER, MD

Director, Ambulatory
Pediatric Neurology

Medical School

University of Chicago
Pritzker School of
Medicine

Postgraduate Training

University of Chicago; Children's
Hospital of Philadelphia

Board certification(s)

Neurology (with Special Qualification
in Child Neurology)

Clinical Specialties

General pediatric neurology,
neuro-oncology, headaches

To make an appointment with
Kristen Padulsky, CPNP, or
Douglas Hyder, MD, please
call 617-636-8100.



PEDIATRIC HEADACHES Q&A with Kristen Padulsky, CPNP Nurse Practitioner in Pediatric Neurology

How common are headaches in children?

They are surprisingly common: headaches are the number one complaint for which children are referred by their pediatricians to our pediatric neurology clinic. Children may begin experiencing headaches as early as three years of age or their onset can begin in the teen years—puberty can be a trigger for migraines. It's important for parents to know that the vast majority of headaches are "primary" headaches, meaning they are an ailment of themselves and are not a symptom of another illness such as a tumor or a brain malformation. Especially for children who are developmentally appropriate, headaches almost always fall into one of two categories: tension headaches and migraine headaches.

What are the symptoms of tension and migraine headaches in children—are they similar to adult symptoms?

Symptoms are often similar to adult headaches. Tension headaches typically involve pain which is a pressing or squeezing feeling and not associated with nausea/vomiting or sensitivity to light/sound. They often occur as a result of stress and may cause kids to be irritable. Migraines often involve nausea or sensitivity to light and sounds. They usually feel pulsing and are made worse with physical activity.

If my child has a headache, how should I respond?

Many headaches respond well to children's ibuprofen (Motrin), and for a child who gets only an occasional headache that would typically be the first choice of treatment. Encouraging the child to rest and drink some fluids may also be helpful—sometimes the best cure for a headache is a nap. If a child is having several headaches a week that don't seem to be related to other illnesses or medications, is missing more than one or two school days a month and is opting to sit out activities he or she enjoys because of headaches, it's probably time to visit the pediatrician. The pediatrician and parents can determine whether the child should be seen by a neurologist. Typically, we see children in neurology when headaches are impacting their normal activities and school or if the pain is not being controlled with first line medications. Again, parents should not assume that a referral to a pediatric neurologist means that their pediatrician suspects that their child may have a brain tumor—we're experts at helping kids and parents learn how to manage headaches.

What are some of the causes or triggers of primary headaches in kids?

Just like adults, some kids are more sensitive to stress, schedule and sleep disruptions and certain ingredients in foods than others. We often give new patients a calendar to

keep track of what's going on in their lives that might give us clues to their headache triggers. We ask patients and parents to keep track of how they slept, what foods they ate and how often they're eating, changes in their family situation, and changes at school. Processed foods, particularly those high in monosodium glutamate (MSG), nitrates, and sodium can trigger headaches in some kids, and skipping meals can also be a trigger. Irregular bedtimes, lack of sleep and stress are common causes. Parents should look for patterns that seem to occur in concert with the onset of headache symptoms. If your child gets a headache every time he has a baseball game, for example, he may be responding to the pressure to perform. Ask your child what feelings he or she may have been having before the start of their headache—were they worried or upset, and if so, why?

For a child who is having many headaches, what types of treatments do you recommend?

Of course it depends on the child and the extent to which the symptoms are impacting their life, but we have both medical and behavioral interventions to offer—and sometimes a combination of both is what's needed for children with truly persistent and severe headaches.

Regarding medications, a child should not be taking ibuprofen every day because of the possible gastric side-effects and because people can actually experience what are called rebound headaches from medication overuse. If a child is taking an over-the-counter medication for headaches more than once or twice a week, a preventative medication should be considered. There are many options to choose from based on a child's age, size, developmental stage and many other factors. The length of time a child may be treated with medication varies greatly.

On the behavior modification side, we often work with families to examine and shift a child's schedule and habits. Often children who experience many headaches aren't getting adequate rest, and they may need an earlier bedtime and better bedtime rituals to signal to their bodies that it is time for sleep. Exercise

can be enormously helpful in reducing stress and reducing the frequency of headaches. School aged children can learn and benefit from many of the same relaxation techniques that adults use—deep breathing, and even meditation and yoga. Limiting screen time is also crucial in cutting back on headaches. Children should minimize their time in front of tv, videogames and computers and should take frequent breaks when participating in these activities. I caution older children and teenagers to be wary of their caffeine intake which can trigger headaches and interfere with sleep.

When a child is referred to pediatric neurology for headaches, what is the typical examination like?

I will take a thorough history of the child's experience with headaches and conduct a neurological exam. Although children may be apprehensive before the visit, the neurologic exam does not hurt and most children think the exam is fun because it involves simple tests for coordination, balance and strength among other things. Parents often ask if an MRI will be performed as part of a routine evaluation. Not all children require an MRI of their brain, the history and physical exam often gives us enough information to make a diagnosis. If we have further questions, we may consider an MRI or other testing.

If a child's headaches are neither tension headaches nor migraines, what are some possible causes?

There are many reasons why children get headaches. Trauma, like a concussion, can cause headaches in some children. While we certainly see concussions in athletes, concussions can occur in many settings when children are playing. It's important to think carefully about possible events that may have resulted in the headache. Other causes of headache can include things that put an increased pressure on the brain such as an increase in cerebral spinal fluid or tumor. However, these are much less common and are usually associated with other symptoms or exam findings. □

RESOURCES

For more headache tips, please visit:

<http://www.americanheadachesociety.org>

http://www.childneurologysociety.org/resources/practice_parameters

Floating Hospital for Children

at **Tufts** Medical
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Schedule a Clinic Visit

To refer a patient to one of our specialty clinics in Boston, **call 617-636-8100.**

For our Chelmsford Specialty Center, **call 978-937-6362.**

For our Woburn Specialty Center, **call 781-897-0240.**

For our Framingham Specialty Center, **call 866-618-5518.**

Admit a Patient

For inpatient admission, **call our Hospitalists at 877-KIDS-FHC (877-543-7342).**

Have Our Physicians Visit You

Interested in hearing directly from our physicians? If you would like to schedule a meeting with any of our physicians or have them to your hospital for grand rounds or other educational sessions, **please contact our Physician Liaison Erin DiBacco at 617-636-3252 or edibacco@tuftsmedicalcenter.org**

Working Together for Healthy Futures is for pediatricians who are interested in learning more about referring patients to Floating Hospital for Children at Tufts Medical Center. We value your partnership with us and want your patients, their families and you to have a positive experience. Our physicians at Floating Hospital recognize that children and families must be cared for as individuals, and their overall physical and emotional health, not just their illness, is essential. It is our mission to treat each of your patients as if he or she was our own child.

Working Together for Healthy Futures is published quarterly by Floating Hospital for Children's Department of Public Affairs and Communications. **Please contact us at 617-636-0200 or healthyfutures@tuftsmedicalcenter.org**

Floating Hospital for Children at Tufts Medical Center is the principal pediatric teaching hospital for Tufts University School of Medicine
www.floatinghospital.org

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