

# Pediatric INSIGHTS

A Physician Resource from Children's Hospital of Pittsburgh of UPMC • [www.chp.edu](http://www.chp.edu)

Special Page 4 Feature

## Battling Bugs

When germs get together, they can cause a lot of trouble

.....

### Age-Appropriate Gynecologic Care

Specialist focuses on medical and surgical treatment

### Caring for Young Eyes

New centers treat pediatric myopia and corneal distortion

### Andy's INSIGHTS

Enhanced access to specialty care with same-day appointments and more

**BEST**  
CHILDREN'S  
HOSPITALS

**U.S. News**  
& WORLD REPORT

HONOR ROLL

2017-18



Children's | of  
Hospital of Pittsburgh | UPMC

# Pediatric INSIGHTS

FALL 2017

## Inside this issue

- 1 ∴ Age-appropriate gynecologic care
- 2 ∴ News you need
- 3 ∴ Caring for young eyes
- 4 ∴ **Feature Story**  
Battling bugs
- 7 ∴ Andy's INSIGHTS
- 8 ∴ Laurels for our staff
- 9 ∴ EEG monitoring via telemedicine

### EDITOR

Lisa Clark

### CONTRIBUTORS

Maggie Bray, Kerry Connell, Mary Kukovich, Kate Lindholm, Marc Lukasiak, Andrew Urbach, MD

### DESIGN

Jim Zahniser

### PHOTOGRAPHY

David Kelly, Annie O'Neill, UPMC Media Services

*Pediatric INSIGHTS* is published four times a year for physicians and friends of Children's Hospital of Pittsburgh of UPMC, which is an equal opportunity employer. It is the policy of Children's Hospital of Pittsburgh of UPMC to admit and to treat all patients without regard to race, color, religion, national origin, ancestry, sex, or disability. Children's Hospital of Pittsburgh of UPMC is a public charity under 501(c)(3) and 170(b)(1)(A) of the Internal Revenue Code. Contributions are deductible to the extent permitted by law. We do not sell or trade our mailing list.

To submit comments or story suggestions, email Kate Lindholm at [kathleen.lindholm@chp.edu](mailto:kathleen.lindholm@chp.edu).

Learn more about Children's Hospital of Pittsburgh of UPMC by visiting [www.chp.edu](http://www.chp.edu).

MC17098 LC/JZ 10/2017 7.1K BP ©2017 UPMC



## The FALL 2017 issue of Pediatric INSIGHTS

**Cover story:** It's not unusual for viruses and bacteria to invade the body at the same time, but it can lead to serious health complications and even death. **John Williams, MD, chief of the Division of Infectious Diseases** at Children's Hospital of Pittsburgh of UPMC, and his colleagues are working to develop vaccines for respiratory infections and track their effectiveness.

### In addition:

- > Conditions that are both common and rare get specialized care at two new centers in the Division of Pediatric Ophthalmology, Strabismus, and Adult Motility at Children's — the **Myopia Treatment Center** and **Corneal Collagen Cross-Linking Center**.
- > **Andy Urbach, MD**, medical director of Patient Experience and Development, discusses how Children's is **working to enhance access to specialty care** with a convenient call center, same-day appointments, and more advanced practice providers.
- > **Children's Epilepsy Monitoring Unit** expands electroencephalography testing and monitoring to four regional hospitals, making access to services convenient for families and referring physicians.

We welcome your feedback, thoughts, and story suggestions. Please share them with one of our physician liaisons, whose contact information you can find on page 7.

Physician Referral Service

**412-692-PEDS**  
(7337)

To refer a patient to any of Children's Hospital of Pittsburgh of UPMC's clinical services, please call our Physician Referral Service at 412-692-PEDS (7337).

Visit the Referring Physicians section of Children's website at [www.chp.edu/physicians](http://www.chp.edu/physicians).

# Age-Appropriate Gynecologic Care

Specialist Offers Medical and Surgical Management for Pediatric Issues

For mothers of young girls in need of gynecologic care, finding a pediatric gynecologist can be a difficult task. Taking their daughter to a practitioner focused on adult gynecology traditionally has been the only option.

With the creation of its Division of Pediatric and Adolescent Gynecology, Children's Hospital of Pittsburgh of UPMC is among those at the forefront of meeting the gynecologic needs of young patients. Established in July 2016, the division offers specialized care and counseling for medical and surgical management of gynecologic problems in newborns to patients up to 26 years old, giving families and primary care physicians more referral options than ever before.



*"There definitely is a need to have more gynecologists who are specially trained to address the issues we see in children and teenagers." — Serena Chan, MD*

Another of the division's goals is training more aspiring gynecologists to meet the special needs of pediatric patients. A 2012 University of Pittsburgh study found that most residents felt they needed to learn more about pediatric and adolescent gynecology. In the study, published in *The Journal of Reproductive Medicine*, only one-third of residency program directors surveyed reported that their residents felt as though they were adequately trained in pediatric and adolescent gynecology.

"More pediatric hospitals are recognizing the need for pediatric and adolescent gynecologists, but it's not yet a service that's available everywhere," says Serena Chan, MD, division chief and assistant professor, Obstetrics, Gynecology, and Reproductive Sciences, University of Pittsburgh School of Medicine.

Dr. Chan completed a fellowship in Pediatric and Adolescent Gynecology following a residency in Obstetrics/Gynecology. At Children's, she helps train residents and fellows in a variety of disciplines about the special needs of pediatric gynecologic patients.

The American College of Obstetricians and Gynecologists recommends that girls have their first routine gynecologic visit between ages 13 and 15. During this initial visit, Dr. Chan provides reproductive health counseling, reviews the patient's menstrual history, and may conduct an external exam. An internal pelvic exam is typically deferred unless there are specific vaginal complaints.

Dr. Chan is careful to provide ample time during each visit to counsel patients and their families about treatment, which empowers patients to take an active role in their health care and

improves their compliance with medical directives. "It's wonderful to have an opportunity to participate in their health care at a young age so that speaking to a physician about gynecologic issues is not such a shock to their system when they get older and deal with health care on their own," Dr. Chan says.

In addition to routine visits, primary care physicians may refer patients in need of complex contraceptive counseling and surgical intervention for congenital anomalies of the reproductive tract. Dr. Chan treats patients with a wide variety of needs, ranging from infants with labial adhesions and pre-teens with early menstruation, to adolescents with hymenal anomalies and ovarian cysts and patients in their mid-20s who have more complex medical needs and have not yet transitioned to adult care.

"Pediatric and Adolescent Gynecology covers a broad area and there is some overlap with other divisions at Children's, which provides an opportunity for physicians to collaborate about the best course of treatment," Dr. Chan says. It also allows physicians to coordinate interventions and minimize the number of surgeries for children with multiple issues.

**Dr. Chan sees Pediatric and Adolescent Gynecology patients at Children's Hospital's main campus in Lawrenceville and Children's South in South Fayette. To refer a patient or request a consultation, please call 412-692-7280.**

## When to Refer

Some of the routine and specialized issues treated by the Division of Pediatric and Adolescent Gynecology include:

- > Congenital anomalies of the reproductive tract
- > Contraceptive and menstrual management in girls with complex health issues
- > Endometriosis
- > Fertility preservation in girls undergoing gonadotoxic chemotherapy or radiation
- > Menstrual disorders
- > Menstrual management and gynecologic concerns in girls with special needs
- > Ovarian cysts and adnexal masses
- > Polycystic ovarian syndrome
- > Primary ovarian insufficiency
- > Vulvovaginal issues in pre-pubertal and pubertal girls

## Serving Patients With Strong Leadership



**Jacqueline Kreutzer, MD**, recently was named chief of the Division of Pediatric Cardiology and medical director of the Heart Institute at Children's Hospital of Pittsburgh of UPMC. Dr. Kreutzer, also professor of Pediatrics at the University of Pittsburgh School of Medicine, is internationally recognized as a leader in interventional cardiology and has served as director of the Cardiac Catheterization Laboratory at Children's Hospital. She joined Children's in 2005.



**Vivek Allada, MD**, who has served as interim chief of the Division of Pediatric Cardiology since 2012 and as clinical director since 2006, has been named executive director of the Heart Institute at Children's. Dr. Allada co-founded and co-chaired the Echo Laboratory Directors Consortium for the American Society of Echocardiography. After assuming his new role as executive director of the Heart Institute, he will continue as clinical director for the Division of Pediatric Cardiology.



**Victor Morell, MD**, is chief of the Division of Pediatric Cardiothoracic Surgery and surgical director of the Heart Institute. Under Dr. Morell's leadership, Children's pediatric cardiovascular surgery has outcomes that are among the best in the nation. Children's had one of the lowest overall four-year surgical mortality rates among all high-volume programs with a rate of 2 percent and was awarded a 3-Star rating by the Society of Thoracic Surgeons (2012-2016). The national average was 3.1 percent.



## Children's Ranks Best in U.S. for Transplant Outcomes

In the Scientific Registry of Transplant Recipients (SRTR) June 2017 data release, the Hillman Center for Pediatric Transplantation at Children's Hospital of Pittsburgh of UPMC ranked best in the United States for outcomes in the following categories:

### PEDIATRIC LIVER TRANSPLANTS

**100%** 1 year overall patient and graft survival

**100%** 1 year living-donor patient and graft survival

**100%** 1 year deceased donor graft survival

### PEDIATRIC HEART TRANSPLANTS

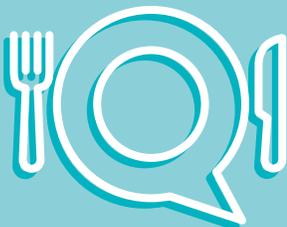
**100%** 3 years pediatric patient and graft survival

Since 1981, our transplant surgeons have performed more than 3,400 pediatric transplants including blood and marrow, heart, intestine, kidney, liver, lung, and pancreas.

For more about SRTR data, read the blog article, "Apples to Apples: What Families Should Know About SRTR Rankings" by George Mazariegos, MD, FACS, chief of Pediatric Transplantation at Children's Hospital. Visit Children's blog at [Childrenspgh.org](http://Childrenspgh.org).

## Free Lunchtime Webinars

## Pediatric INSIGHTS WEBINAR SERIES



Children's Hospital of Pittsburgh of UPMC introduces the **Pediatric INSIGHTS Webinar Series**, free lunchtime webinars presented by Children's Hospital specialists on topics of interest to pediatricians. Visit [www.chp.edu/webinars](http://www.chp.edu/webinars) to find out about upcoming webinars and view an archive of past presentations. Questions or suggestions for future topics? Email us at [MDrelations@chp.edu](mailto:MDrelations@chp.edu).

# Children's Cares for Young Eyes

Two New Centers Treat Ophthalmic Conditions From Common to Rare

Two new centers at the Division of Pediatric Ophthalmology, Strabismus, and Adult Motility at Children's Hospital of Pittsburgh of UPMC address pediatric eye conditions that are both common and rare.

The Myopia Treatment Center was founded to address the growing problem of nearsightedness in young people in the United States. About one in five 12-year-olds in the U.S. has myopia, making it the most common cause of blurred vision symptoms in teens. What is clear is the Myopia Treatment Center's focus on the prevention, study, and treatment of myopia. It is also a resource for parents to get solid advice and proper surveillance of their child's nearsightedness.

Children can be referred to the Myopia Treatment Center by a physician or can self-refer. When a child is referred, pediatric ophthalmologists will first check the level of nearsightedness.

IF THE RESULTS OF THE EXAM SHOW:	THEN:
 Low or moderate myopia	We'll ask the patient to follow up at the center in a few months.
 High myopia	Our pediatric eye disease experts will define a treatment pathway.

Children with high myopia also will have a genetic test to find out if there is a genetic basis for their nearsightedness.

## What sets the Myopia Treatment Center apart?

Individuals with myopia typically wear glasses or contact lenses to correct their vision. Research conducted in Asia showed that treatment with atropine eye drops — more commonly used to treat lazy eye — can in low doses retard the development of myopia. In higher doses atropine eye drops can bring on unwanted side effects. The team at the Myopia Treatment Center are experienced using the medicated eye drop treatment for myopia in pediatric patients.

For patients 21 years or older, refractive laser surgery to correct nearsightedness can be done. Under special circumstances, younger patients also may have refractive laser surgery. Patients of the Myopia Treatment Center have surgery at the Eye & Ear Institute, part of the UPMC Eye Center.

Team members in the Division of Pediatric Ophthalmology are developing clinical pathways intended to continually improve the treatment of pediatric patients with myopia.

For more information about the Myopia Treatment Center, visit [www.chp.edu/myopiacycenter](http://www.chp.edu/myopiacycenter).

## Children's establishes Corneal Collagen Cross-Linking Center

The Corneal Collagen Cross-Linking Center at Children's Hospital is the only center in Pennsylvania able to treat progressive keratoconus in teens and individuals with developmental delays with corneal collagen cross-linking, or CXL.

Keratoconus is a progressive thinning and distortion of the cornea, affecting about one in 2,000 Americans, more commonly those with Down syndrome. Keratoconus, or KC, produces distorted, blurred vision that's difficult to correct with glasses. In children with allergies or others who tend to rub their eyes, the rubbing can further thin and distort the cornea. This can worsen the KC and, over time, may result in a need for a corneal transplant.

CXL is a much-needed way to treat keratoconus, especially in people with developmental delays, to avoid:

- > Visual disability and decreased quality of life
- > Hydrops and scarring
- > Corneal transplant surgery

CXL uses vitamin B2 eye drops and ultraviolet light to strengthen the chemical bonds in the cornea. It received approval from the U.S. Food and Drug Administration in April 2016. The goal of the treatment is to halt progressive and irregular changes in the shape of the cornea known as ectasia. Creating new collagen cross-links helps strengthen the cornea.

Younger patients and those who have developmental delays may undergo general anesthesia for the cross-linking procedure. Once the patient is asleep, both corneal topography studies and pachymetry can be done when they are lying down (supine) using specialized equipment.

Corneal topography is a procedure that maps the surface of the cornea, similar to making a contour map of land. The purpose of corneal topography is to create a detailed description of the cornea to aid our specialists in diagnosis and treatment. Corneal pachymetry measures the thickness of the cornea. Pachymetry is necessary to ensure that the corneal collagen cross-linking procedure is safe to perform on the patient.

The corneal collagen cross-linking procedure is performed at Children's main campus in Lawrenceville.

**Please call the Division of Pediatric Ophthalmology, Strabismus, and Adult Motility at 412-692-8940 for information or to refer a patient to either the Myopia Treatment Center or the Corneal Collagen Cross-Linking Center. •**



# Battling Bugs

.....

When germs get together, they can cause a lot of trouble.

**ABOVE:** Specialists at Children's Hospital of Pittsburgh of UPMC treated little Lillian McCarthy-Arnone (pictured with her mother, Chelsea Maze) for severe respiratory infections.

At 10 months old, little Lillian McCarthy-Arnone was a cuddly baby, but on one night in March, she was more cuddly than usual. She didn't have a fever, but she wasn't feeling well and wanted extra attention. Her mother took her to the hospital nearby, but within the hour they were on their way to Children's Hospital of Pittsburgh of UPMC via helicopter. Lillian's lungs weren't getting enough air.

Throughout an initial surgery, imaging studies, a month on extracorporeal membrane oxygenation (ECMO), and finally a tracheotomy, Lillian was battling both methicillin-resistant *Staphylococcus aureus* pneumonia and infection with human metapneumovirus (HMPV). While these germs worked together to make Lillian sick, her doctors worked together to make her well.

## When bad bugs conspire

It's not unusual for viruses and bacteria to invade the body at the same time. Lowered immunity due to one infection makes it easy for the next germ to take hold.

During a particularly bad year for the flu, John Williams, MD, found himself caring for two teenage boys. Both had been healthy before, but they hadn't had their flu vaccinations — and now, their cases of the flu had turned into *Staphylococcus aureus* pneumonia. This

serious complication results in death in up to 30 percent of cases. Staph pneumonia isn't rare, but it isn't exactly common, either. It was odd to see two cases of it at once.

Both boys were in the hospital for a long time. One recovered, but one did not.

"These cases were frustrating. Why did one boy live, and why didn't the other?" wondered Dr. Williams. "It goaded me into studying the immune response to figure out why some kids get so much sicker than others with the same illness."

### Pathogens old and new

Dr. Williams and the colleagues in his lab are leaders in the study of respiratory infections and especially HMPV, a recently discovered virus that is a major cause of acute lower respiratory tract illness in infants and children worldwide. HMPV is as common as the flu, but it wasn't discovered until 2001.

HMPV can cause severe — even fatal — disease in people who are at high risk; babies who are born prematurely, transplant recipients, older adults, and people with chronic cardiopulmonary disease are more susceptible than others. "Parents know about respiratory viruses, but they don't know about HMPV — even though it's everywhere," says Dr. Williams. And HMPV can also go hand-in-hand with other diagnoses, as in Lillian's case.



*"These cases were frustrating. Why did one boy live, and why didn't the other? It goaded me into studying the immune response to figure out why some kids get so much sicker than others with the same illness."*

—John Williams, MD

### Tracking down the germs

Dr. Williams is chief of the Division of Infectious Diseases at Children's Hospital. He and the other experts in the group see enough respiratory infections that they feel compelled to track and research both the common and uncommon diseases that come through their door.

In the United States, most kids have access to vaccines, clean water, nutritious food, and health care. But around the world, respiratory infections are the leading cause of death for children under the age of 5. The second most common worldwide cause of childhood death is diarrhea and the dehydration it can bring.

*Continued on page 6*



## Narrowing Down the Threat: the New Vaccine Surveillance Network

The New Vaccine Surveillance Network (NVSN) is a project of the U.S. Centers for Disease Control and Prevention dedicated to the study of how vaccines work against certain diseases. The study sites focus on surveillance and data collection; they also track how vaccine policies can affect health.

Children's is one of only seven institutions nationwide participating in this surveillance project. The information the researchers gather from tracking disease outbreaks will help to guide health policy decisions and investments in drug development.

At Children's, the Division of Infectious Diseases is especially interested in respiratory infections and transplant infections. Dr. Williams also studies the immune system's role in lung infections. And as for the flu, the NVSN is a critical component of national pediatric flu surveillance. The leadership of the NVSN in this area has led to the development of flu vaccine policies across the country.

The NVSN project classifies and tracks each strain of respiratory infection so that scientists can target specific germs with vaccines, immunotherapy, or combinations of these. There has already been some success with this approach in the development of yearly flu vaccines — scientists have learned how to anticipate which of the four strains are most likely to affect a population within a given area during the flu season. Because these bugs can mutate very quickly, predictions aren't always perfect, but the flu vaccine generally works better than having no vaccination at all.



The Hillman Foundation supports the research of John Williams, MD, at Children's.

## Philanthropy Helps Fund Investigative Research

The Division of Infectious Diseases at Children's Hospital of Pittsburgh of UPMC benefits from the generous support that accompanies the appointment of John Williams, MD, as the Henry L. Hillman Endowed Chair in Pediatric Immunology.

Federally sponsored research has its limits, and that's where philanthropic funding comes in. In a traditional federal grant, scientists must strictly adhere to the scope outlined in the project description — but sometimes, science does its own thing. It's not uncommon for a course of research to turn up entirely unexpected results. With a philanthropic donation, the investigative team can take their work in new directions. The unfettered support allows for the pursuit of ideas that then lead to other ideas and, in the best cases, to actionable knowledge.

For donors, there is no downside. The product they are supporting is better pediatric health, and the team at Children's has already demonstrated leadership and success in this area. The support of the Hillman Foundation and other philanthropic partners allows Children's researchers to function flexibly and freely.

"In the developing world, respiratory infections and diarrhea kill more children than malaria, tuberculosis, and AIDS combined," says Dr. Williams. Even in the U.S., where deaths from these illnesses are uncommon, respiratory and gastrointestinal infections still take a toll in terms of missed workdays, hospitalizations, and emergency department visits. And for a kid with a weakened immune system, even a cold can be deadly.

There aren't many medicines that can fight these infections, so vaccination is the most promising route — but before researchers can develop effective vaccines, they have to know exactly what they're up against. That's not easy, because many germs are known to mutate and evolve. Another complication is that the germs that cause respiratory and gastrointestinal infections are so numerous.

Dr. Williams and his colleagues are working to develop vaccines for HMPV, and their research holds much promise. The ability to conduct clinical research along with basic research in the lab is an advantage that not every hospital has. In 2016, Dr. Williams and his team received a \$5 million, five-year grant from the U.S. Centers for Disease Control and Prevention to join the New Vaccine Surveillance Network (NVSN), which collects and analyzes information on respiratory and gastrointestinal viruses and evaluates the effectiveness of vaccines. The Children's Hospital team focuses on disease data from Allegheny County and other areas that it serves.



**ABOVE:** "She's all done with her therapies, and now she runs around like a normal, typical 2-year-old kid," says Lillian's mother, Chelsea Maze. "She is amazing."

Lillian's otolaryngologist, Dennis Kitsko, DO, removed her trach tube in July of the following year. "She's doing so well," says her dad, Matthew McCarthy-Arnone. "This has been a long, long journey, and she has a little catching up to do, but that hasn't stopped her in any way." •

### Bouncing back — and breathing well

Lillian spent her first birthday in a medically induced coma. She had acquired yet another respiratory virus, and her care team was focused on keeping her breathing. They were also seeking to understand how her infections interacted. When the physicians were able to bring her infections under control, she recovered rather quickly.



## Andy's INSIGHTS



### Answering the Call

Children's Hospital of Pittsburgh of UPMC receives more than 60,000 calls monthly for our pediatric specialists. The challenge before us: How can we see your patients as quickly as possible, within the same day if needed, while optimizing the time and talents of our specialists?

Children's Hospital is growing, thanks in great measure to the confidence of pediatricians like you who entrust your patients to our care. In return, we're consistently looking for ways to improve and maximize your patients' access to our specialized pediatric care.

Children's has developed an innovative, three-pronged solution to help us better serve referring physicians and their patients. It includes the introduction of centralized pediatric scheduling, the availability of same-day appointments, and a groundbreaking new program to train skilled advanced practice providers in pediatric specialties.

#### Centralized scheduling

Until recently, scheduling typically was handled by our individual departments. But as patient demand grew, many found it harder and harder to handle call volume efficiently.

On July 1 our new Pediatric Contact Center opened featuring an onsite team of 30 scheduling agents. Agents receive specialized pediatric training directly from the subspecialty divisions to give schedulers the broader knowledge they need to schedule appointments based on caller needs.

The centralized pediatric call center also will yield critical insights into patient demand by specialty — from seasonal surges to steady growth — so we know where to invest appropriate staffing and other resources to improve our patient outcomes and quality of service.

#### Same-day appointments

For the convenience and peace of mind of families, select medical and surgical specialties at Children's now offer a limited number of same-day appointments. Callers are offered the first available appointment in a requested specialty at one of Children's locations throughout the region. (Families are not able to request a specific provider or location, and patients may require a follow-up appointment.) We have been testing this service since July, successfully scheduling more than 1,000 same-day appointments each month.

#### Training advanced practice providers

Hospitals and medical practices nationwide increasingly rely on advanced practice providers (APPs), who are highly skilled professionals such as physician assistants and certified registered nurse practitioners, to extend and support their health care services. They have been a vital part of Children's team for many years, but we are introducing an unprecedented new fellowship program to provide formal, intensive in-house training to APPs in specific pediatric specialties. No other children's hospital in the country is offering a program of this magnitude, which promises to extend the breadth and efficiency of our services and provide cost savings for our patients.

Individually and collectively, these three initiatives affirm Children's commitment to respond to the needs of your patients through creative solutions that improve patient access, control costs, and advance the quality of care.

**Andy Urbach, MD, is medical director for Patient Experience and Development at Children's Hospital. He welcomes your comments and questions. Please send an email to [MDrelations@chp.edu](mailto:MDrelations@chp.edu).** •

## At Your Call

CONNECT WITH CHILDREN'S HOSPITAL OF PITTSBURGH OF UPMC

#### VISIT NAVIGATION

Our outpatient visit coordinator helps manage the complexities of scheduling multiple medical appointments for patients who need to return to Children's Hospital of Pittsburgh of UPMC three or more times within the same month. For more information, contact Visit Navigation at [visitnavigation@chp.edu](mailto:visitnavigation@chp.edu) or 412-692-5687. **Erinn Kasubinski, RN, BSN**, is the Visit Navigation manager.

#### PHYSICIAN LIAISONS

Our team serves as liaisons between physicians in the community and our pediatric specialists. Contact them with questions, comments, and concerns.



**Judi Morris-Feinberg**  
412-692-5428  
[judi.feinberg@chp.edu](mailto:judi.feinberg@chp.edu)



**Monica Reisz**  
412-692-5376  
[monica.reisz@chp.edu](mailto:monica.reisz@chp.edu)

# Laurels

These Children's Hospital staff members recently received recognition in their fields.



**Alejandro Hoberman, MD**, has been appointed president of Children's Community Pediatrics. In addition to these new duties, Dr. Hoberman continues to serve as division chief for General Academic Pediatrics and the vice chair for clinical research in the Department of Pediatrics, as Children's Hospital of Pittsburgh of UPMC seeks to build even closer clinical collaborations and synergy with community pediatricians and pediatric subspecialists.



**Diego Chaves-Gnecco MD, MPH, FAAP**, director and founder of the program SALUD Para Niños at Children's Hospital of Pittsburgh of UPMC, received the F. Edwards Rushton CATCH Award at the American Academy of Pediatrics (AAP) National Conference and Exhibition in Chicago in September. The award honors pediatricians who collaborate within their communities to increase children's access to health care and other needed services.



**Tim Hand, PhD**, a principal investigator at Children's Hospital of Pittsburgh of UPMC, has received an Innovator Award from the Kenneth Rainin Foundation. The \$100,000 award supports his research on the role of dietary simple sugars in predisposing Inflammatory Bowel Disease.



**Amy Houtrow, MD, PhD, MPH**, was named the 2017 recipient of the American Congress of Rehabilitation Medicine Edward Lowman Award for individuals whose careers reflect an energetic promotion of the spirit of interdisciplinary rehabilitation. Dr. Houtrow is chief of the Division of Pediatric Rehabilitation Medicine, vice chair of Physical Medicine and Rehabilitation, and director of the Spina Bifida Program at Children's Hospital of Pittsburgh of UPMC.



**George Mazariegos, MD, FACS**, chief of Pediatric Transplantation, is the new president of the Intestinal Rehabilitation & Transplant Association (IRTA). Dr. Mazariegos recognized outgoing president, Debra Sudan, MD, of Duke Health, at the closing ceremony of the XV International Congress of the Intestinal Rehabilitation & Transplant Association held June 28 to July 1, in New York City.



**Michael Moritz, MD**, clinical director, Division of Pediatric Nephrology, and medical director, Pediatric Dialysis, Children's Hospital of Pittsburgh of UPMC, received a 2017 Publons Peer Review Award given to the top 1 percent of scientific reviewers in medicine who performed the most verified pre-publication peer reviews on Publons.com. In addition, Dr. Moritz received recognition for his article, "Decreased Severity of Shiga Toxin-Producing Escherichia Coli Haemolytic Uraemic Syndrome (STEC-HUS) in a Child With Type 1 von Willebrand Disease," published in the prestigious *BMJ Case Reports*. The International Consortium for Clinical Research Excellence, Education and Ethics selected the article into the PubINDEX International, a curated medical index.



**Rakesh Sindhi, MD**, director of Pediatric Transplant Research at Children's, was awarded a \$2.3 million R01 grant from the National Institutes of Health to map disease pathways for biliary atresia by identifying susceptibility genes in 800 children transplanted for this disease. Biliary atresia causes liver failure and accounts for half of all liver transplants in children worldwide.



**Kishore Vellody, MD**, medical director of the Down Syndrome Center of Western Pennsylvania at Children's Hospital of Pittsburgh of UPMC, was appointed president of the board of directors of the National Down Syndrome Congress. In July, an article about his experience with his brother who has Down syndrome was published by *The Mighty*, an online community for people to share stories and find support and resources for a variety of health topics.



**Jerry Vockley, MD, PhD**, chief of Medical Genetics at Children's Hospital of Pittsburgh of UPMC and director of the Center for Rare Disease Therapy, recently led an American College of Medical Genetics and Genomics workgroup and was the primary author of a treatment guideline for phenylketonuria (PKU). His PKU research has been awarded three grants from the National Institutes of Health, including \$1.8 million plus \$225,000 to develop two phenylalanine meters. A third grant for \$1.1 million will support research led by Dr. Vockley, **Robert Nicholls, PhD**, and **Steve Dobrowski, PhD**, to explore long-term consequences on the brain of PKU and its treatment.

# EEG Monitoring Expands to Region

Telemedicine Improves Access to Specialists at Children's Hospital

Deep in the heart of Children's Hospital of Pittsburgh of UPMC there's a command center devoted to monitoring the brain waves of children with seizure disorders and brain injuries. With the implementation of telemedicine, this high-tech unit has expanded its services to help care for children at hospitals throughout the region.

Children's Epilepsy Monitoring Unit has seven board-certified epileptologists — specialized pediatric neurologists who are trained to read and interpret electroencephalography (EEG) studies — 21 technologists who monitor the EEG testing. When other hospitals don't have the volume of pediatric patients who require EEGs to support an on-staff epileptologist of their own, they can turn to the experts at Children's, designated a Level 4 Epilepsy Center by the National Association of Epilepsy Centers.

"The availability of pediatric EEG testing can be important for prompt and appropriate clinical care and vital to attaining better clinical outcomes," says Christina Patterson, MD, director of Epilepsy

and the Epilepsy Monitoring Unit, and medical director for the Pediatric Epilepsy Surgery Program at Children's.

Through the EEG telemedicine service, doctors at Children's assess electrical activity in the brain for patients ranging

in age from newborn infants to adolescents in their late teens. Suspicion of seizures or epilepsy is the most common indicator for EEG testing, but doctors also evaluate mental status when there has been brain trauma or infection.

Telemedicine services include routine outpatient EEG, inpatient EEG, and prolonged continuous monitoring and ambulatory studies. Children's also supplies newborn nursery and neonatal intensive care EEG interpretations as well as prolonged continuous monitoring in the Neonatal Intensive Care Unit setting. Tests are administered at the participating hospital, and the results are relayed to Children's where they can be reviewed in real time.

*"We are offering these services to other hospitals in an effort to improve specialized care for pediatric patients and their families."*

— Christina Patterson, MD



**ABOVE:** Children's epileptologists (standing, left to right) Yoshimi Sogawa, MD; Christina Patterson, MD; Patricia Crumrine, MD; and Inna Vaisleib, MD, consult while (seated, left to right) Heidi Ellefson, R. EEG-T, and Jonell Taylor, R. EEG-T, monitor patients.

The service has aided in the treatment of approximately 300 patients per year since 2005, Dr. Patterson says.

The Children's Epilepsy Monitoring Unit currently provides EEG telemedicine services to Magee-Womens Hospital of UPMC in Oakland, UPMC Hamot in Erie, UPMC Northwest in Seneca, and West Penn Hospital in Pittsburgh. In addition, neighborhood pediatricians and family practice doctors may elect to send patients to the closest participating hospital for testing — making access to services convenient for families.

"It's a huge advantage for other hospitals and doctors to be able to tap into the level of expertise at Children's," says Carla Hill, division administrator in the Department of Pediatrics at Children's. Ms. Hill coordinates the reporting system between hospitals so that EEG readings from other facilities and interpretations from Children's are appropriately transferred, either through compatible electronic medical record systems, fax, or telephone.

"We want to provide the most technologically advanced and comprehensive testing for patients who are at risk for seizures and epilepsy, expand access for families, and provide better treatment for these kids in terms of managing their illness," Dr. Patterson says. "This is not only important for treatment and diagnosis in a patient's local setting, but it also enables us to identify kids who are at high risk and need to be brought to Children's Hospital for an increased level of specialized care."

**For more information, please contact the Telemedicine Center at Children's Hospital of Pittsburgh of UPMC at 412-692-8633 (TMED) or by email at [telemedicine@chp.edu](mailto:telemedicine@chp.edu).** •



**Altoona**  
**Chippewa**  
**Erie**  
**Hermitage**  
**Johnstown**  
**Children's Hospital of Pittsburgh of UPMC**  
**South Fayette**  
**Steubenville**  
**Washington**  
**Wexford**  
**Wheeling**

## We're Your Children's Hospital.

No matter where your patients are in the tristate region, Children's Hospital of Pittsburgh of UPMC is their children's hospital. From Altoona to Zelenople and all points in between, Children's Hospital has the medical and surgical subspecialists and individualized, family-centered care your patients and their families have come to rely on. **Visit [www.chp.edu](http://www.chp.edu).**

