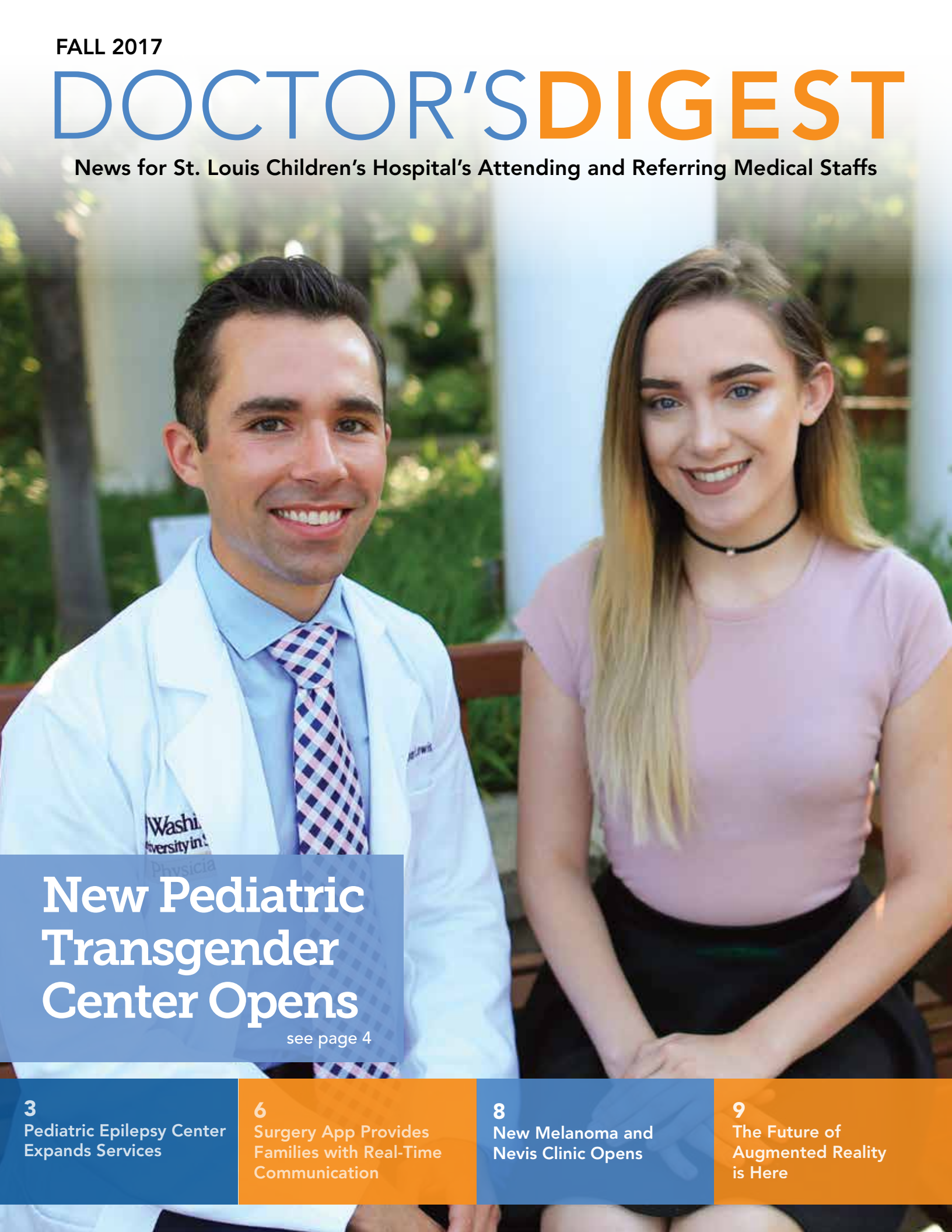
FALL 2017

DOCTOR'S DIGEST

News for St. Louis Children's Hospital's Attending and Referring Medical Staffs



New Pediatric Transgender Center Opens

see page 4

DOCTOR'S DIGEST
News for St. Louis Children's Hospital's Attending and Referring Medical Staffs

SHARE YOUR IDEAS

Should you have ideas or suggestions you would like brought before the Children's Medical Executive Committee (CMEC), contact one of your CMEC private physician representatives:

John Galgani, MD
jgalgani@essehealth.com

Karla Keaney, MD
karlakeaney@gmail.com

Jennifer Arter, MD
arter@wudosis.wustl.edu

John Cole, MD
jccole3@sbcglobal.net

Kevin Murphy, MD
northwestpediatric@sbcglobal.net

LET US HEAR FROM YOU

If you have comments or suggestions regarding *Doctor's Digest,* or if you would like to share information about your activities as a physician, contact:

Jennifer Pickett
Marketing and Communications
St. Louis Children's Hospital
4590 Children's Place
Suite 6203
Mailstop 90.29.955
314.286.0376
fax: 314.747.8644
Jennifer.Pickett@bjc.org

SLCH Physicians Named to "Best Doctors in St. Louis" List

St. Louis Children's Hospital is pleased to announce that 166 physicians spanning 32 specialties have been named to *St. Louis Magazine's* annual "Best Doctors" list for the metropolitan area.

Founded by Harvard Medical School physicians more than 25 years ago, Best Doctors Inc. helps identify outstanding physicians who elevate the level of care in our area. Only 5 percent of physicians practicing in the United States earn this honor, decided by impartial peer reviews.

To view the complete list of honorees, visit StLouisChildrens.org/DD.

Adolescent Medicine
Sarah Garwood, MD

Allergy, Immunology & Pulmonology
Leonard B. Bacharier, MD
Thomas Ferkol, MD
James S. Kemp, MD
Peter Michelson, MD
Jeffrey R. Stokes, MD
Stuart Sweet, MD, PhD

Anesthesiology
Tom E. Cox, MD
James Fehr, MD
David J. Murray, MD

Cardiology
David T. Balzer, MD
Charles C. Canter, MD
R. Mark Grady, MD
Mark C. Johnson, MD
Caroline Lee, MD
Gautam Singh, MD
George F. Van Hare, III, MD

Cardiothoracic Surgery
Peter Manning, MD
Pirooz Eghtesady, MD, PhD

Critical Care
Allan Doctor, MD
Avihu Gazit, MD
Matthew Goldsmith, MD
Mary Hartman, MD
Jose Pineda, MD
Philip C. Spinella, MD

Dermatology
Susan J. Bayliss, MD

Emergency Medicine
Doug Char, MD
Dee Hodge III, MD
Robert M. Kennedy, MD
David Schnadower, MD, MPH

Endocrinology & Metabolism
Ana Marie Arbelaez, MD
Abby Hollander, MD
Paul W. Hruz, MD, PhD
Bess Marshall, MD
Neil White, MD

Gastroenterology
Lori R. Holtz, MD
Shannon M. Joerger, MD
Robert Rothbaum, MD
David Rudnick, MD
Charles Samson, MD
Janis M. Stoll, MD
Phillip Tarr, MD
Yumirle Turmelle, MD
Elizabeth Utterson, MD
Alexander Weyman, MD

Genetics
Marwan Shinawi, MD

Gynecology
Diane F. Merritt, MD
Valerie Ratts, MD

Hematology/Oncology
Frederick S. Huang, MD
Monica L. Hulbert, MD
David Wilson, MD, PhD

Hospitalist Medicine
Kim Hamlin, MD
Michael Turmelle, MD

Infectious Disease
David Hunstad, MD
Jason Newland, MS, MD
Rachel C. Orscheln, MD
Gregory A. Storch, MD

Nephrology
Vikas Dharnidharka, MD,MPH
Paul Hmiel, MD, PhD
Keith A. Hruska, MD

Neurological Surgery
Ralph G. Dacey, Jr., MD
David D. Limbrick, MD
Matthew D. Smyth, MD

Neurological Surgery
David D. Limbrick, MD
Matthew D. Smyth, MD

Neurology
Mary E. Bertrand, MD
Anne M. Connolly, MD
Christina Gurnett, MD
Soe S. Mar, MD
Michael J. Noetzel, MD
Alan Pestronk, MD
Bradley L. Schlaggar, MD
K. Liu Lin Thio, MD, PhD
Michael Wong, MD, PhD
John M. Zempel, MD, PhD

Newborn Medicine
F. Sessions Cole, MD
Jeffrey G. Dawson, MD
Brian P. Hackett, MD, PhD
Anna S. Lijowska, MD
Amit M. Mathur, MD
Joan L. Rosenbaum, MD
Barbara Warner, MD

Nuclear Medicine
Farrokh Dehdashti, MD
Keith C. Fischer, MD
Henry D. Royal, MD
Barry Siegel, MD

Ophthalmology
Susan M. Culican, MD
Gregg T. Lueder, MD
Lawrence Tychsen, MD

Orthopedic Surgery
Keith H. Bridwell, MD
Ryan Calfee, MD
John Clohisy, MD
Matthew B. Dobbs, MD
Richard H. Gelberman, MD
Charles A. Goldfarb, MD
J. Eric Gordon, MD
Munish Gupta, MD
Mark Halstead, MD
Devyani Hunt, MD
Scott J. Luhmann, MD
Matthew J. Matava, MD
Douglas McDonald, MD
Regis James O'Keefe, MD
Heidi Prather, DO
Perry L. Schoenecker, MD

Otolaryngology
Craig Buchman, MD
Richard A. Chole, MD
Keiko Hirose, MD
David W. Molter, MD
Allison Ogden, MD

Pathology
Louis P. Dehner, MD

Plastic Surgery
Susan E. Mackinnon, MD
Thomas H. Tung, MD
Alison Snyder-Warwick, MD

Psychiatry
Robert Brady, MD
John N. Constantino, MD
Anne L. Glowinski, MD
Joan L. Luby, MD
Ginger Nicol, MD
T. Eric Spiegel, MD

Radiation Oncology
Jeff M. Michalski, MD

Radiology
Thomas E. Herman, MD
Robert McKinstry, III, MD
Marilyn J. Siegel, MD

Rheumatology
Andrew White, MD

Surgery
Patrick A. Dillon, MD
Maria B. Doyle, MD
Martin Keller, MD
Jacqueline Saito, MD
Brad W. Warner, MD

Urology
Paul F. Austin, MD
Douglas E. Coplen, MD

Community Pediatricians/ Subspecialists
Susan Elizabeth Adams, MD
Ardis Allison, DO
Patricia J. Amato, MD
Dana E. Ankney, MD
Jennifer L. Arter, MD
Jean E. Birmingham, MD
Trina J. Blythe, MD
Lorena Buffa, MD
David J. Callahan, MD
Glen S. Cheng, MD
Darryl S. Cohen, MD
John Davis, MD
Ray S. Davis, MD
Gerry L. Deschamps, MD
Alla Dorfman, MD
Matthew P. Dougherty, MD
Jennifer Dunn, MD
Adam C. Eaton, MD
Jay Epstein, MD
Gregory K. Finn, MD
Edward Fliesher, MD
John Galgani, MD
Joseph Goldenberg, MD
Gary M. Goodman, MD
Laquita A. Graham, MD
David Hartenbach, MD
Laura K. Hartman, MD
Angela Jones, MD
Joel Koenig, MD
Denise H. Kung, MD
Kenneth C. Levy, MD
John Madden, MD
Julia Mayer, MD
Kimberli E. McCallum, MD
Maggie McCormick, MD
Thomas C. McKinney, Jr.,MD
Margaret M. Mueller, MD
Alison C. Nash, MD
Karen K. Norton, MD
Jerome O'Neil, MD
Allison H. Oswald, MD
Jennifer A. Panasci, MD
Daniel Plax, MD
Juanita Polito-Colvin, MD
Peter Putnam, MD
George Rezabek, MD
James R. Rohrbaugh, MD
Isabel L. Rosenbloom, MD
Christina Ruby-Ziegler, MD
Martin D. Rudloff, MD
Joseph Schachter, MD
Margaret Ann Schmandt, MD
Connie D. Simmons, MD
Paul S. Simons, MD
Alan J. Skoultchi, MD
Robert D. Spewak, MD
Randall S. Sterkel, MD
Lisa Suffian, MD
Elizabeth Sugarbaker, MD
Kristen A. Terrill, MD
Stanley E. Thawley, MD
Donna T. Thackrey, MD
Jeffrey M. Wright, MD
Hayley M. Wurzel, MD
Julia C. Young, MD
Cecilia H. Yu, MD
Andrew Zuckerman, MD

Neurosurgeon Matthew Smyth, MD, and his team are among the first to acquire ROSA technology.

Pediatric Epilepsy

Center Expands Services

Due to an increase in demand for procedures and services, St. Louis Children's Hospital (SLCH) is expanding its Pediatric Epilepsy Center. The expansion will include additional surgical technology, two epileptologists, EEG technologists and an ICU EEG.

SLCH uses state-of-the-art surgical technology to treat children with epilepsy. ROSA, or Robotized Surgical Assistant, has two roles in epileptic surgery: to map out the procedural route before surgery, and to assist during surgery. Children's epilepsy neurosurgeons have performed upwards of 20 procedures with the help of ROSA since acquiring the technology almost a year ago.

"ROSA allows us to better see the onset and spread of seizures in three dimensions across the brain, while doing so in an efficient and minimally invasive fashion," says Rejean Guerriero, DO, Washington University pediatric neurologist at SLCH. "It allows us to ask and answer questions about the relationship between cellular networks and their seizure susceptibility in remote parts of the brain that moves well beyond our prior abilities and technology. "

ROSA creates a 3-D map for the surgeons to follow during a procedure, and holds the surgical tools precisely and firmly in place. The precision and strength of ROSA has made brain surgery safer than ever before. The technology enables surgeons to perform less invasive procedures, with smaller incisions and less bleeding. It has reduced surgery time by hours, and has helped patients recover in days rather than weeks. ROSA also reduces the patient's risk of pain and infection.

In 2016, epilepsy surgery volumes at SLCH increased more than 30 percent from the previous year. To accommodate the growth in volume, the Pediatric Epilepsy Center is adding two epileptologists. Stuart Tomko, MD, who trained at Texas Children's and Boston Children's hospitals, began in July. Dr. Guerriero, who finished his residency and fellowship at Boston Children's Hospital before coming to SLCH less than a year ago, will be spearheading the new ICU EEG program, which launched this summer.

According to Bradley Schlaggar, MD, PhD, Washington University neurologist-in-chief and director of the Division of Pediatric and Developmental Neurology at SLCH, the ICU EEG program will allow physicians to identify and treat seizures more easily using EEG machines.

"This service will increase our ability to optimize outcomes for patients in our pediatric, cardiac and neonatal intensive care units," says Dr. Schlaggar. "It has become increasingly clear that neurocritically ill children have clinically unrecognized seizures with sufficient frequency that it is important to use EEG technology to identify those seizures."

Children's is adding several EEG technologists to identify the source of seizures in patients using EEG equipment. "We are transferring responsibility for patient observation in the epilepsy monitoring unit from our patient care techs to the EEG techs in order to improve the quality and consistency of the process," says Susan Hibbits, OTR/L, director of neuroscience at SLCH. With the addition of new technologists and equipment, St. Louis Children's Hospital plans to quickly and accurately identify seizures in patients in order to provide them with proper care.

As demand increases for advanced epilepsy treatment, SLCH will continually expand the Epilepsy Center to accommodate patients from the St. Louis region, across the United States and around the world.

To learn more about the Pediatric Epilepsy Center at SLCH or to refer a patient, call Children's Direct at 800.678.HELP (4357).

Jessica and her family.

Transgender Center

Offers Multidisciplinary Services to Growing Patient Population

The newly established Washington University Transgender Center at St. Louis Children's Hospital provides care to children and adolescents who identify as a gender different from the sex they were assigned at birth. It is the only center of its kind in the region.

Growing up, Jacob Allmon was quiet and shy. "I could tell he wasn't really a happy kid, and he struggled in school," said Tracy Allmon, Jacob's mother. "I saw genuine glimpses of his 'true self' when he was with his girlfriends, playing dolls and dress up."

Jacob and his family didn't know it at the time, but they were beginning to embark on a long journey that would bring them to St. Louis Children's Hospital (SLCH), where Jacob would ultimately become Jessica.

"We are taking a multidisciplinary approach to the care we provide for these children and adolescents," says Washington University physician Christopher Lewis, MD, pediatric endocrinologist at SLCH and Center director. "We are committed to providing a safe, supportive and welcoming environment in which transgender people may receive the education, medical assistance and mental-health counseling they need to make informed decisions that will impact their well-being throughout their lives."

The center is a response to the growing number of transgender patients seen by Dr. Lewis and his SLCH colleagues. Dr. Lewis believes the reason for the increase in this patient population is twofold.

"There is greater cultural acceptance of people who have a gender identity different from what they were assigned at birth. That acceptance has made it more comfortable for them to disclose their identity to their family and friends and have a life as their affirmed gender," he says.

The individualized care provided at the Transgender Center is based in part on the age and pubertal status at which children or adolescents are seen initially. Someone

who has not yet received counseling may need a referral to a mental health provider, who can assess for the diagnosis of gender dysphoria and determine if any other issues exist, such as depression, low self-esteem, anxiety or substance abuse. In younger children, this assessment and an informational discussion with a pediatric endocrinologist may be all that needs to be done until the child enters puberty.

"Some parents may need help thinking through the right course of action going forward—for instance, timing for social transition," says Sarah Garwood, MD, Washington University adolescent medicine physician at SLCH. "We can connect parents to community resources and support groups that can help them support their children."

Adolescent medicine physicians specialize in the unique development needs of teens and also consult on patients referred for anxiety, depression, eating disorders, sexual and reproductive health care, and other concerns. Stigma and discrimination contribute to mental health diagnoses occurring at higher rates in transgender people.

For patients who have started puberty, pubertal blockers exist as an option to suppress undesired, irreversible secondary sexual characteristics such as deepening of the voice and facial hair for transgender females and breast development for transgender males. After meeting readiness and eligibility criteria, patients between the ages of 14 and 16 may begin taking cross-sex (gender-affirming) hormones that help make their physical body match their inner gender.

"Of course it is ideal if patients come to us prior to or in the early stages of puberty, but we can help older teenagers and young adults make the transition as well and in any way they want to," says Dr. Lewis. "For some transgender people, adjustments in gender expression, such as preferred name and pronouns, makeup, hair, voice, clothing and/or behavior are enough. Some may want only hormonal therapy, while others want both hormonal and surgical interventions. Our goal is to help our patients make these decisions and then ensure they have the resources to carry them through, including referrals to legal services."

In June, Drs. Lewis and Garwood met with local advocates and mental health providers to introduce the new transgender center and to elicit feedback. "Our plans for the center are to make it an important community resource that encompasses more than just a clinic setting. That will also include establishing a database in order to start developing research studies to advance how we approach care for transgender individuals," says Dr. Lewis.

Now 18 years old, Jessica can finally be herself. Once a shy, quiet young boy who struggled in class, Jessica has blossomed into a lively, outgoing young woman who graduated high school on the honor roll. "I don't know where we would be right now if it weren't for Dr. Lewis," said Tracy. "He changed Jessica's life 100 percent."

The Center accepts self-referrals or referrals from physicians and mental health providers. Patients are seen Tuesday afternoons at the St. Louis Children's Hospital Specialty Care Center in west St. Louis County and Wednesday mornings at SLCH.

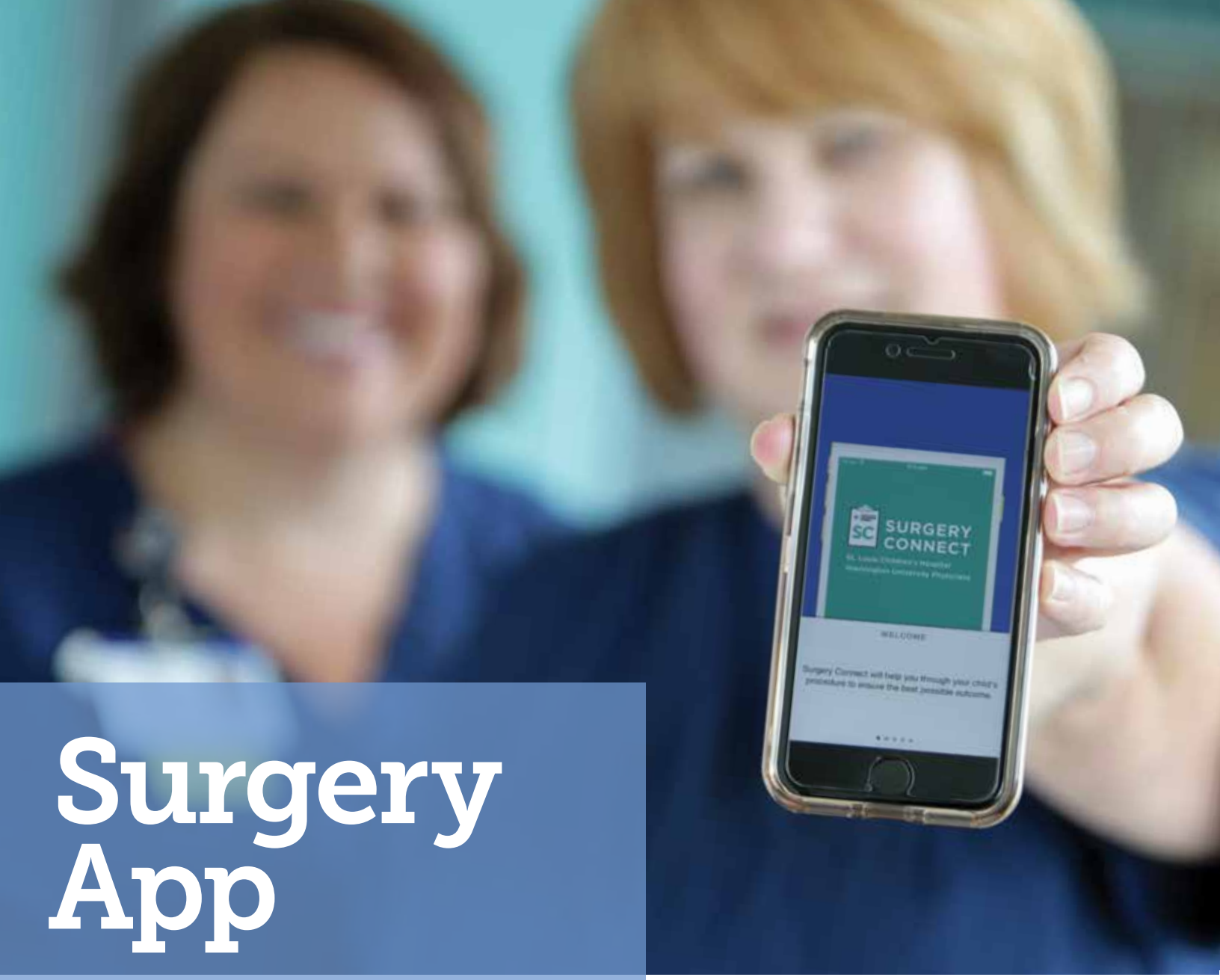
To refer a patient, call Children's Direct at 800.678.HELP (4357). For additional information, listen to Drs. Lewis and Garwood's podcast discussing services offered at the Center at StLouisChildrens.org/TransgenderPodcast.

Dr. Lewis, pictured with Jessica, is the 2017 Equality Award recipient presented by the Human Rights Campaign.

Services Provided at the Washington University Transgender Center at St. Louis Children's Hospital

Multidisciplinary medical and psychological consultations for transgender individuals and their families:

- Puberty blockers
- Cross-sex (gender-affirming) hormone therapy
- Speech therapy
- Surgical referrals
- Legal services referrals
- Support letters for gender marker and name change
- Connections to support groups and community resources



Surgery App

Provides Families With Pre, Post and Just-in-Time Communication

A surgery app now in use at the St. Louis Children's Hospital Specialty Care Center (CSCC) conveys to parents vital information they need prior to, during and after their child's outpatient surgery.

Called Surgery Connect, the app was developed to streamline communication between nurses and parents and to provide a convenient means to access pre- and post-surgical instructions and details about an array of surgical procedures.

"It is sometimes difficult to contact parents by phone, and when we do, they may be answering while doing something else like driving, shopping, working—things that distract them from the information we are giving them about their child's surgery," says Beth Smith, BSN, RN, CSCC Perioperative Services. Smith and Emily Pharr, BSN, RN, were instrumental in developing the app.

"Previously we spent a lot of time making calls to remind parents about arrival times and NPO instructions, often with the result of playing 'telephone tag'."

The solution was to develop an app geared toward tech-savvy Millennial parents. A week prior to a child's surgery, nurses call parents to conduct a medical screening. At that time, parents who want to use Surgery Connect are instructed to download the free iPhone and Android app and are provided with a code consisting of their child's case number and the last four digits of their primary phone number.

Once connected to the app, parents receive important reminders such as the time of their child's surgical procedure, when they are to arrive at the CSCC, NPO prompts and discharge instructions. They also may access descriptions of the outpatient surgeries performed at the CSCC, what they should do to prepare for the surgery, what to expect upon arrival and the amenities available while waiting, such as how to access the CSCC's Wi-Fi.

"The app also allows operating room nurses to provide updates to parents during the procedure. Then the post-op nurse sends a text to let them know they can come to recovery to see their child and talk to the surgeon," says Pharr.

Alissa Haycraft is one of many parents who have found Surgery Connect to be a valuable resource for information and reassurance when her 5-year-old son, Michael, underwent an adenotonsillectomy at the CSCC.

"For me, the best features of the app were the easy-to-access preparation instructions for surgery, the ability to load it on multiple devices, and communication about my son's progress during surgery," she says. "My parents met us at the CSCC that morning. My father downloaded the app and looked up directions and arrival instructions himself. It was such a blessing not to worry about them getting lost. The app allowed my husband and me to focus on our son."

Since its introduction last fall, 78 percent of parents have opted to use Surgery Connect. Among the most popular screens viewed have been descriptions of procedures, how to prepare for the surgery, details about the visit to the CSCC, home care, and what to do the night before and day of surgery.

"The Surgery Connect app has given us another effective way to communicate with patients and families in the pre- and peri-operative period," says Washington University physician David Leonard, MBBCh, attending physician in otolaryngology/head and neck surgery, and co-medical director of the CSCC. "It is a valuable reference that parents can turn to at their own convenience for information about their child's procedure—both general information about the surgery and the expected post-operative course, and specifics such as their arrival and surgical times."

He adds, "As our patient and parent populations become more connected, I am confident the Surgery Connect app will continue to become an increasingly important communication tool."

Smith and Pharr plan to expand the information available on Surgery Connect, ranging from medication reminders to hotel listings, and possibly extend usage to outpatients and inpatients at St. Louis Children's Hospital's main campus and to other BJC HealthCare facilities.

"More broadly, this concept has the potential of helping manage patient care; for instance, a newly diabetic patient could use a similar app to input their sugars, with that information accessible to a hospital caregiver who can help them learn how to manage their disease," says Smith. "The possibilities are exciting."

To learn more about Surgery Connect, call Children's Direct at 800.678.HELP (4357).

Beth Smith, BSN, RN, CSCC Perioperative Services, and Emily Pharr, BSN, RN.

New Melanoma and Nevus Clinic Opens

Siteman Kids at St. Louis Children's Hospital (SLCH) opened a Pediatric Melanoma and Nevus Clinic in May dedicated to serving patient families with concerns about melanoma and nevus. Melanoma is the most common skin cancer in children and adolescents.

Moles and birthmarks are common in children and most of the time are no cause for concern. Sometimes, however, the appearance of a mole or changes within a mole require a specialist's attention. Siteman Kids formed the clinic to address the diagnosis and treatment of atypical or malignant moles that can affect children's health.

The clinic is an interdisciplinary effort between SLCH's dermatology and oncology departments. Based at the St. Louis Children's Hospital Specialty Care Center, the clinic primarily sees patients referred by physicians, but patients may also book appointments directly.

The clinic, in conjunction with Washington University Physicians, offers a multidisciplinary approach, including physicians in dermatology, pediatric oncology, plastic surgery, pediatric surgery and pediatric otolaryngology with support of radiology, dermatopathology and genetics. Because so many specialties can be involved in a patient's treatment, it can be difficult to coordinate care.

"That's one of the reasons we established the clinic. We make it a priority to coordinate care and follow-up with multiple specialists all in one location, and preferably on the same day. That really expedites treatment," says Carrie Coughlin, MD, Washington University pediatric dermatologist at SLCH.

All care is provided by pediatric specialists with board certification in their specialties. In addition, the clinic helps advance clinical and scientific knowledge about these conditions through participation in databases and clinical trials.

The Pediatric Melanoma and Nevus Clinic treats patients with:

- Melanoma
- Skin lesions concerning for melanoma
- Atypical moles, including atypical Spitz nevi
- Large or giant congenital moles
- Familial skin cancer predisposition syndromes

Clinics are held twice monthly on Thursdays at St. Louis Children's Hospital Specialty Care Center in west St. Louis County. To refer a patient, call Children's Direct at 800.678.HELP (4357). Listen to Dr. Coughlin's podcast about the new Clinic at StLouisChildrens.org/MelanomaPodcast.

Dr. Jennifer Silva, Dr. Jon Silva and computer engineer Mike Southworth learn how to interact with the software.

The Future

of Augmented Reality is Here

Originally published in the Spring issue of Pathways, *a newsletter for investors of the Children's Discovery Institute. Written by Patti McCarty.*

Washington University School of Medicine biomedical engineer Jon Silva, PhD, was at a Microsoft conference and had just seen a demonstration of the Microsoft Hololens, the first self-contained hologram computer. This technology enables its user, who is looking through specially designed goggles, to interact and engage with three-dimensional holograms in their three-dimensional space. They call it "augmented reality."

"Do you think you could use this in your lab?" he asked his wife after explaining what he'd just witnessed.

His wife is Jennifer Silva, MD, Washington University pediatric cardiologist and director of pediatric electrophysiology at St. Louis Children's Hospital. Dr. Silva spends her days performing minimally invasive procedures on children and young adults with heart rhythm abnormalities. Often, her work involves threading catheters up through blood vessels into the heart and ablating the heart tissue to prevent abnormal electrical signals from moving through the heart. Currently, she watches her work on a two-dimensional display from which she has to create a mental three-dimensional model based on her knowledge of heart anatomy. This method has its limitations, given that children with abnormal heart rhythms often have abnormal hearts and no two are the same.

So, her answer was yes and when can she get her hands on it?

Dr. Jon Silva flew home and went to work on the enhanced electrophysiology visualization and interaction system. He wrote a computer program that connects the heart mapping systems used to construct point-to-point maps of the heart's interior surface to the holographic display software. The result, as hoped, is a hologram of a heart with which Dr. Jennifer Silva will be able to interact. They have created prototype holograms of past patients. While wearing the Hololens goggles, Dr. Jennifer Silva can see the heart she is working with floating in mid-air in front of her. She is able to move around it freely and collaborate with those assisting her with a procedure. As a catheter moves around the heart in real time, she can see where it's going and what it's touching.

With this technology, she will be able to provide the therapy needed more precisely and quickly.

"I have spent years looking at images of the heart, whether they be through electroencephalography, X-ray or fluoroscopy in the cath lab, and I have never seen the heart the way I've seen it through this system," says Dr. Jennifer Silva. "What's amazing is that I learn something new about the heart's anatomy every time I interact with the holograms. That's good news for my future patients."

To take the technology to the human prototype stage, the Silva team proposed, and were awarded, a three-year Children's Discovery Institute (CDI) grant. In that time, they hope to complete a proof-of-concept study of pediatric patients undergoing ablation procedures. The CDI funding has allowed them to hire Mike Southworth, a computer engineer with advanced degrees in electrical engineering and computer science from Johns Hopkins, who worked at Boeing prior to joining the team. He will further refine the computer programming needed to bring the 3-D holograms to life.

"It seems futuristic, but it's happening right now," Dr. Jon Silva says. In fact, the research team anticipates being approved for a human clinical trial by the end of 2017.

Dr. Jennifer Silva marvels at the speed with which they've been able to create a prototype to test.

"Typically, when you start a research project, you know it's going to take years before you have a work product, whether that be a manuscript or a clinical trial. Because we already have a prototype we can work with in augmented reality space, it seems like a whirlwind. We are already learning how to interact with a patient-specific hologram and can watch a catheter work inside that hologram, that heart, with such clarity."

But, she adds, this is bigger than how it affects the work in her lab. "We think we have a real opportunity for Children's Hospital to be a destination for procedures that are informed by augmented reality, not just in the cardiac cath lab, but throughout the hospital."

To learn more about the research grant or to speak with Dr. Jennifer Silva, call Children's Direct at 800.678.HELP (4357).

SLCH Welcomes New Interns

Every year since 1910, St. Louis Children's Hospital, in partnership with Washington University School of Medicine in St. Louis, recruits new interns to its pediatric residency program. This year, 1,200 applications were reviewed and over 300 candidates were interviewed.

"I'm pleased to welcome these exceptionally talented new interns to our program, including four from Washington University School of Medicine in St. Louis, two Saint Louis University students, six MD/PhDs, and four future child neurologists," says Andrew White, MD, the James P. Keating, MD, Professor of Pediatrics and vice chair of medical education. "This longstanding tradition allows us to train future pediatricians to not only care for our children, but ultimately, our future."

Laura E. Albert
BS, Vanderbilt University, 2013
MD, St. Louis University, 2017

Frances N. Annan
BS, Hampton University, 2010
MD, Indiana University, 2017

Marie L. Batty
BA, St. Louis University, 2013
MD, St. Louis University, 2017

Olivia G. Beaubrun
BS, University of Pittsburgh, 2012
MD, George Washington University, 2017

Ari N. Berlin
BS, Rice University, 2012
MD, Washington University, 2017

Jordan J. Cole
BS, University of Arizona, 2013
MD, Washington University, 2017

Ãine C. Cooke
BS, National Univ. of Galway, Ireland, 2012
MD, Poznan University, Poland, 2016

Alexander L. Crider
BS, University of Iowa, 2013
MD, University of Illinois, 2017

Stephanie R. Diggs
BS, Howard University, 2012
MD, Morehouse School of Medicine, 2017

Ibrahim M. Elsharkawi
MD, Royal College of Surgeons, 2014

Laura A. Gilbert
BS, Northwestern University, 2011
D.O., Kansas City University, 2017

Lauren W. Gregory
BS, Eastern Virginia Medical School, 2013
MD, Eastern Virginia Medical School, 2017

Mia S. Henderson
BA, BS, University of Arizona, 2005
M.A., Loyola Marymount University, 2007
MD, PhD, Washington University, 2017

Grace E. Kennedy
BA, Trinity College, Dublin, 2012
MD, University College Dublin, 2016

Amelia B. Kreienkamp
BA, Wellesley College, 2013
MD, University of Colorado, 2017

My-Lien T. Nguyen
BS, University of Oklahoma, 2012
MD, University of Oklahoma, 2016

Phillip N. Nguyen
BS, University of Florida, 2014
MD, University of Florida, 2017

Oluwatobi (Tobi) F. Olayiwola
BS, Stanford University, 2010
MD, University of Minnesota, 2016

Fehintola O. Omidele
BA, BS, University of Texas, Austin, 2010
M.P.H., Johns Hopkins Health, 2017
MD, University of Texas, 2014

Brock A. Phillips
BS, University of Illinois, 2013
MD, University of Illinois, 2017

Michael C. Quinn
BS, Duquesne University, 2006
MS, Duquesne University, 2009
MD, PhD, Sidney Kimmel Medical College, 2017

Sheila Razdan
BA, Johns Hopkins University, 2012
M.P.H., Johns Hopkins School of Public Health, 2016
MD, University of Maryland, 2017

Amanda H. Reis
BA, Middlebury College, 2013
MD, Washington University, 2017

Michael J. Ripple
BS, Louisiana State University, 2007
MS, Louisiana State University, 2009
MD, PhD, Louisiana State University, 2017

Erin L. Sadler
BS, College of William & Mary, 2012
MD, Eastern Virginia Medical School, 2017

Shruti Sakhuja
BS, Houston Baptist University, 2012
MD, University of Texas, 2017

Ellen M. Schill
BA, University of Virginia, 2009
MD, PhD, Washington University, 2017

Kelsea M. Schreiber
BA, Smith College, 2013
MD, University of Missouri-Columbia, 2017

Dina Soloveychik
BS, Indiana University, 2013
MD, Indiana University, 2017

Julie A. Steinberg
BA, Princeton University, 2010
MD, Weill Cornell Medicine, 2017

Tess L. Suttles
BS, University of Texas, Austin, 2013
MD, Texas A&M College of Medicine, 2017

Stefani S. Tica
BA, Duke University, 2012
M.P.H., Indiana University, 2017
MD, Indiana University, 2017

Theresa M. Timm
BA, University of Pennsylvania, 2012
MD, Oakland University, 2017

Timothy A. Wilson
BS, Lubbock Christian University, 2012
MD, Texas Tech University, 2017

John (Jack) T. Wren
BS, Washington & Lee University, 2010
MD, PhD, Wake Forest Medical Center, 2017

Jingshing Wu
BA, Harvard University, 2004
PhD, Yale University, 2015
MD, University of Chicago, 2017

Case Study:

"Body Building"

The following case study was used by Andrew J. White, MD, the James P. Keating, MD, Professor of Pediatrics and division director of pediatric rheumatology, Washington University School of Medicine, and director of the St. Louis Children's Pediatric Residency Program, as part of the "Patient of the Week" (POW) series. Many of the POW case studies cover uncommon illnesses, or common illnesses with unusual presentations. If you would like to be added to the POW email distribution, send an email to white@kids.wustl.edu.

CC: "Rash"

Term baby admitted to the NICU who is well-appearing, except for this rash that started at nine hours of life and comes and goes. It only occurs on exposed extremities. Child otherwise looks great, labs and echo are normal. Nothing in the family history.

Differential diagnosis:

1. Unknown
2. Scleredema (not scleroderma… congenital scleredema has been reported, but very rarely. It is progressive however, not episodic)
3. Urticaria, (cold induced urticaria due to mutations in CIAS1, e.g.)
4. Cutis marmorata telangiectatica congenital, doubt

Diagnosis: Infantile transient smooth muscle contraction of the skin

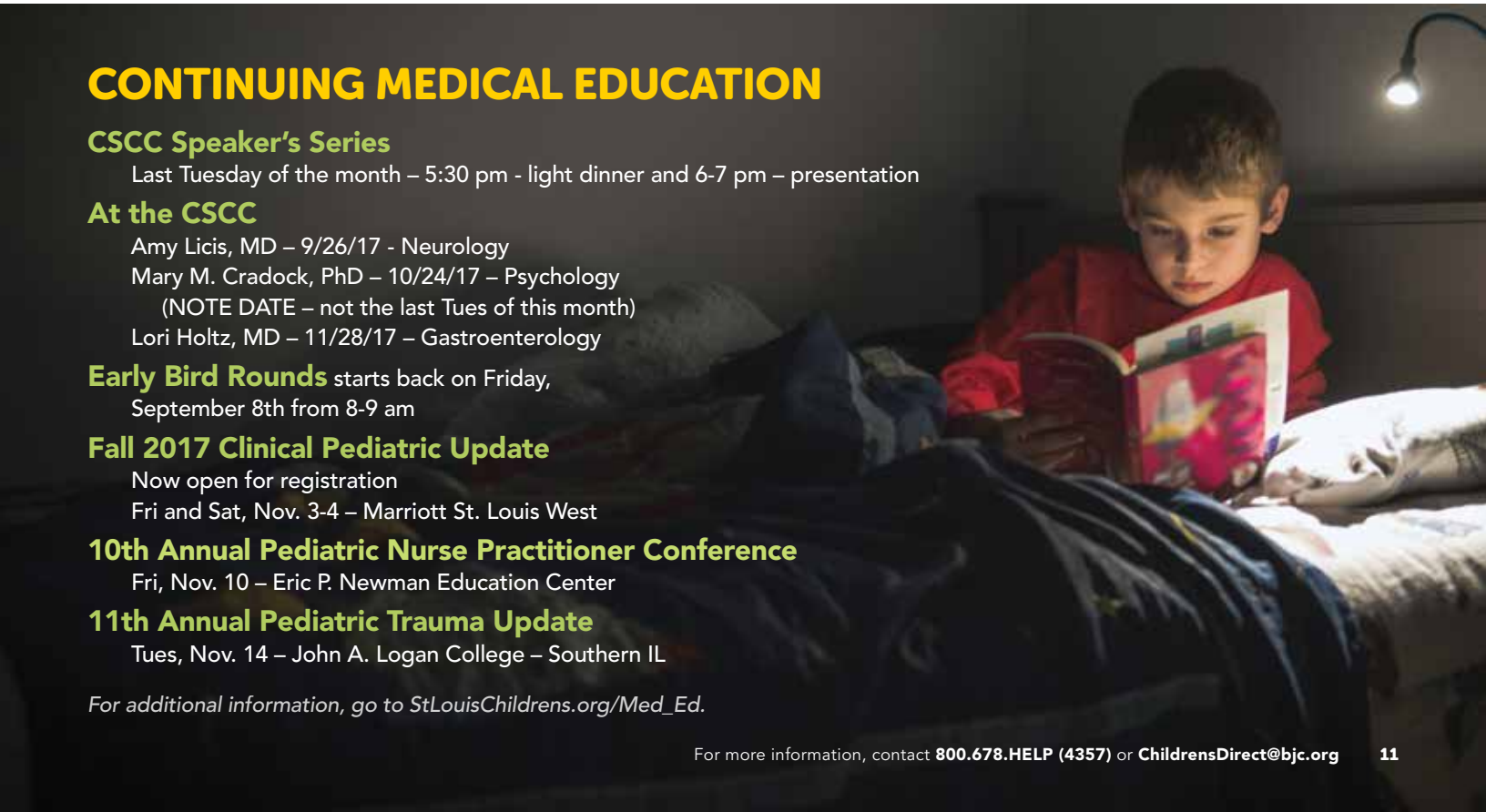
Comment: Transient phenomena are relatively common in newborns, and include acrocyanosis, cutis marmorata, abnormal sweating, and harlequin color changes, which are believed to be due to immaturity or instability of the autonomic nervous system. This infant appears to have another, caused by transient smooth muscle contraction. In reference No.1 at right, nine newborns were described with this phenomenon, all AGA term, and all triggered by cold air exposure, friction of bathing, but in some cases occurring spontaneously (or without recognized trigger). Skin biopsies in three of the children were normal, although a few showed **hyperplastic smooth muscle** tissue. The legs are affected predominantly, and in-between episodes, the skin appears normal. The phenomenon resolves as the infants age, generally gone completely by 18 months.

References:

1. Torrelo, et al, Infantile transient smooth muscle contraction of the skin, J Am Acad Derm, *Sept 2013, p 498*

2. Eichenfield, et al, Neonatal dermatology, 2nd ed, Philadelphia PA, Elsevier, *2008*

3. Fine, et al, Transient rippling of the skin (smooth muscle hamartoma?). Ach Dermatol *1974;110:141*



CONTINUING MEDICAL EDUCATION

CSCC Speaker's Series

Last Tuesday of the month – 5:30 pm - light dinner and 6-7 pm – presentation

At the CSCC

Amy Licis, MD – 9/26/17 - Neurology
Mary M. Cradock, PhD – 10/24/17 – Psychology
(NOTE DATE – not the last Tues of this month)
Lori Holtz, MD – 11/28/17 – Gastroenterology

Early Bird Rounds starts back on Friday, September 8th from 8-9 am

Fall 2017 Clinical Pediatric Update

Now open for registration
Fri and Sat, Nov. 3-4 – Marriott St. Louis West

10th Annual Pediatric Nurse Practitioner Conference

Fri, Nov. 10 – Eric P. Newman Education Center

11th Annual Pediatric Trauma Update

Tues, Nov. 14 – John A. Logan College – Southern IL

For additional information, go to StLouisChildrens.org/Med_Ed.

Children's HOSPITAL • ST. LOUIS
BJC HealthCare

Washington University in St. Louis
Physicians

Marketing and Communications
4590 Children's Place, Suite 6203
St. Louis, MO 63110
MS 90-29-955
StLouisChildrens.org

BEST CHILDREN'S HOSPITALS
U.S.News & WORLD REPORT
RANKED IN 10 SPECIALTIES
2017-18

Learn more about the subjects discussed in this issue by calling **Children's Direct** at **800.678.HELP (4357)**.