InTouch
WITH RESEARCH
at Stanley Manne Children's Research Institute

Summer 2016 • Volume 13: Issue 2

IN THIS ISSUE

Leading Child and Community Health Research

The Uptown Clinic at Ann & Robert H. Lurie Children's Hospital of Chicago is buzzing with activity today. In the mix is Matt Davis, MD, MAPP, the recently-appointed head of Academic General Pediatrics and Primary Care at Lurie Children's. A leader with seemingly boundless energy and enthusiasm, Davis shares his thoughts on his new role. "I am a big advocate of finding out what our patient families think is important, and then working on those priorities," he says.

Davis calls this idea of community responsiveness "inreach." Like its corollary "outreach," the term suggests that patients and families must have a voice in deciding on institutional research priorities.

"Let's use an example. A clinician looks at data showing an area of Chicago that has a high rate of asthma," he explains. "She goes to that community and invites residents to talk about asthma, but nobody shows up to the meeting. Now the clinician wonders what went wrong." Davis says that the problem began with the clinician's approach. "By using data, she focused on what she thought was the community's health priority. But asking residents would have given her the knowledge that they are much more concerned about experiencing violence, leaving their children home alone, or being able to access healthy food. This gives us an illustration of how we should approach healthcare and research with communities," he concludes.

Leading Child and Community Health Research (continued from page 1)

Davis trained in pediatrics and internal medicine. His interests led him to pursue a degree in public policy and health services research. "Even with that unique skill set, about 10 years ago I realized that I was mostly trying to impact the families and kids in the community, but I was not actually interacting with them in my research," he says. That realization launched the National Poll on Children's Health, housed at the University of Michigan, which asks the public about their top health concerns. The results show that their priorities include obesity, smoking, drug abuse, violence and bullying. Says Davis, "The problem for children's hospitals is that these priorities are not what they feel comfortable addressing."

The fact that Lurie Children's is deeply involved in this type of work is one reason Davis decided to come to Chicago. He knows that Helen Binns, MD, MPH, helps families prevent and treat obesity and lead poisoning, that Karen Sheehan, MD, MPH, is a leader on gun violence and safety, and that Barbara Bayldon, MD, regularly asks parents about their food, job and housing insecurities. He also knows that Lurie Children's President & CEO Patrick Magoon, and Department of Pediatrics Chair Thomas Shanley, MD, are committed to serving the community.

"Looking ahead, I have the privilege of collaborating with clinicians from all backgrounds, and I'm excited by the opportunities that working across disciplines provide. I look forward to contributing my experience in health services research and health policy to collaborators and to young investigators," he comments. Davis plans to take the National Poll on Children's Health and adapt it for Chicago area communities – Cook and the collar counties, and maybe across the State of Illinois. "A Poll on Chicago Children's Health would make a special effort to reach out to families that have been impacted by the exceptional care that Lurie Children's provides," he says.

In working with communities in the area and creating programs that fit their needs, Davis envisions the chance to build a rich repository of information that can be shared and used by parents and families, government agencies, researchers and non-profit organizations, to name a few. This data registry would contain community feedback, including the impacts that programs have on health outcomes.

"Researchers at Lurie Children's have built a number of data registries that are disease-specific and on their own platforms," he says. "A shared institution-wide registry would be so helpful to families and researchers. I want to help Lurie Children's make community connectedness one of its best assets," he concludes.

Matthew M. Davis, MD, MAPP, is head of the Division of Academic General Pediatrics and Primary Care at Lurie Children's, director of the Mary Ann & J. Milburn Smith Child Health Research Program and Associate Chief Research Officer for Health Services and Policy Research at Stanley Manne Children's Research Institute, and Professor of Pediatrics at Northwestern University Feinberg School of Medicine.

Thomas P. Shanley, MD, is Chairman of the Department of Pediatrics, Chief Research Officer at the Manne Research Institute, and Founders' Board Centennial Professor in Pediatrics, Lurie Children's and the Feinberg School.

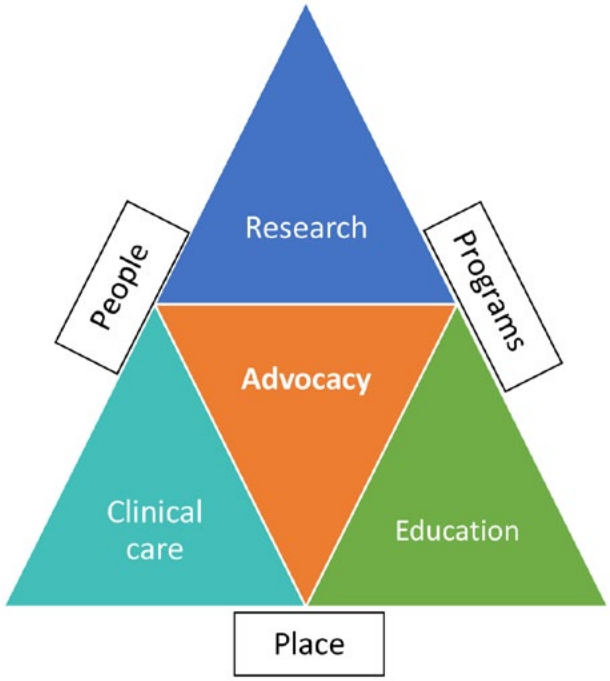
Helen Binns, MD, MPH, is an attending physician in the Division of Academic General Pediatrics and Primary Care at Lurie Children's, a member of the Smith Child Health Research Program at the research institute, and Professor of Pediatrics and Preventive Medicine at the Feinberg School.

Karen Sheehan, MD, MPH, is an attending physician in the Division of Emergency Medicine at Lurie Children's, a member of the Smith Child Health Research Program at the research institute, and Professor of Pediatrics at the Feinberg School.

Barbara Bayldon, MD, is an attending physician in the Division of Academic General Pediatrics and Primary Care at Lurie Children's, and Associate Professor of Pediatrics at the Feinberg School.

Chief Research Officer's Message

Thomas P. Shanley, MD, is Chairman of the Department of Pediatrics
Chief Research Officer, Stanley Manne Children's Research Institute
Founders' Board Centennial Professor in Pediatrics
Ann & Robert H. Lurie Children's Hospital of Chicago
Northwestern University Feinberg School of Medicine



The research imperative of Ann & Robert H. Lurie Children's Hospital of Chicago is to advance our status as a leading center of scientific discovery and innovation. Recently, our governing boards approved the Vision 2025 plan, which sets the agenda for us to become a leading center of discovery and innovation. It aims to expand clinical capabilities to benefit more children, and it seeks to secure committed and enduring philanthropy.

Research intensive academic pediatric centers seek to provide the highest quality, evidence based, cost effective and safe clinical care; train the next generation of providers and investigators; and provide an environment that fosters research to advance pediatric care.

At Lurie Children's, research programs will be instituted within the following translational research pillars:

- Basic science research
- Clinical research / trials
- Comparative effectiveness
- Dissemination science
- Population and health services research

The National Institutes of Health places priority on funding research projects that show clinical application. We will recruit top scientists, actively engage employees in innovative thinking, create educational and professional development opportunities and career ladders, and leverage partnerships to advance our discovery capacity. The roadmap to success involves leading clinical and research integration.

A series of research priorities have been identified that would impart the following themes:

Precision medicine	Science of gender and sex development
Pediatric fertility, hormone restoration	Predictive analytics for clinical decision making
Neuroscience of pain	Technology and innovations for pediatric data
Fetal origins of disease (placental physiology)	Advancing the ideal cardiogenic state
Regenerative medicine	Optimizing neurodevelopment in high risk cohorts
Food allergy	Immunobiology of host-pathogen interaction
Curing neuromuscular disease	Measuring and instilling childhood resiliency

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Stanley Manne Children's Research Institute is the research arm of Ann & Robert H. Lurie Children's Hospital of Chicago, and a virtual center for pediatric research at Northwestern University Feinberg School of Medicine. Founded in 1989, the research enterprise has grown to include more than 200 investigators and over $30 million in external funding for research, two-thirds from the NIH and other federal agencies.

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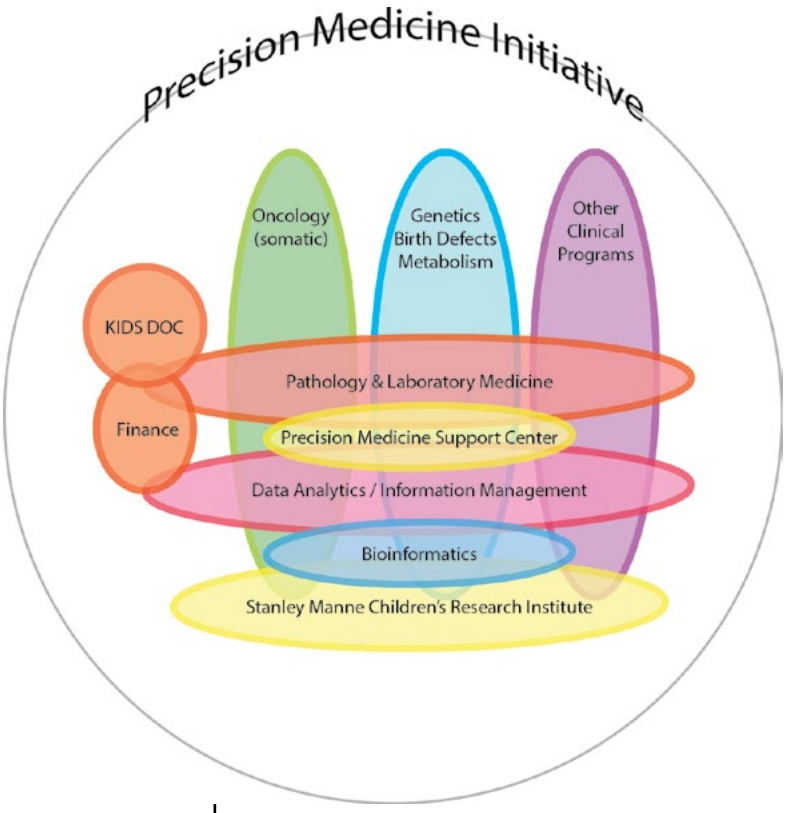


Precision Medicine at Lurie Children's

A bold move to customize medical treatments to the exact needs of patients

At his presentations to the boards, specialties and researchers at Lurie Children's, Thomas Shanley, MD, is articulating his focus on priority areas for research and clinical care. One of the two "fast-track" programs that Shanley has endorsed is the Precision Medicine initiative. This incubator for ideas and talent is coalescing around two childhood disease categories: cancer and epilepsy.

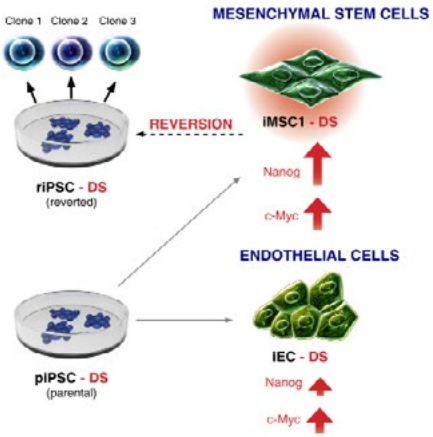
What is precision medicine? According to the National Institutes of Health (NIH), "Precision medicine is an emerging approach for disease treatment and prevention that takes into account individual variability in genes, environment, and lifestyle for each person." Lurie Children's will participate in the NIH-funded and White House-led Precision Medicine Initiative (PMI).

The PMI seeks to drastically improve outcomes in patients with diseases while also finding ways to prevent diseases from ever happening. Participants will represent every facet of the U.S. population. The ultimate goal for patients is to deliver the right drug for the right person at the right dose. In the long term, achieving the PMI's goals will provide a much better infrastructure for treating, curing and preventing diseases than currently exists.

At Lurie Children's, the initiative will require the contributions of many individuals and groups across a spectrum of specialties – oncology, neurology, genetics, data analytics, information technology, bioinformatics, pathology and others. A robust support center will be created to accommodate the needs of these specialties, recruit genetic counselors, scientists, clinical staff and others, streamline workflows, and make resources and personnel available on demand. The Lurie Children's PMI will include components such as genomic analysis, drug metabolism, a patient consenting form and a biorepository.

"Our patients will be treated based upon the unique underlying cause of their disease, and upon unique biologic characteristics that determine their response to their disease and to the therapy provided," says Susanna McColley, MD, site Principal Investigator at Lurie Children's, Associate Chief Research Officer at the Manne Research Institute and Professor of Pediatrics at the Feinberg School.

"This research is exceptionally exciting and will make a huge impact on our understanding of disease and wellness in diverse patient populations, including children," she continues. "Chicago has a wide range of demographics and this is important when looking at genetic influences on health. For example, race and ethnicity can influence how patients metabolize drugs." Shannon Haymond, PhD, Director of Laboratory Research and Assistant Professor of Pathology at the Feinberg School, is the co-Principal Investigator at Lurie Children's.



A diagram that summarizes the process of reversion in stem cells (illustration: Vasil Galat, PhD).

Discovery in Stem Cells May Lead to Better Precision Medicine

Adult cells reprogrammed to revert to stem cells capable of differentiating into any kind of specialized cell hold enormous therapeutic potential for a wide range of devastating diseases. The option to use these induced pluripotent stem cells (iPSCs) is attractive because it avoids the controversial practice of obtaining stem cells from human embryos. Aside from the tremendous potential of iPSCs in organ repair and tissue regeneration, iPSCs have an increasing role in disease modeling and precision medicine.

A study from the Manne Research Institute, published in *Stem Cells and Development*, describes an identity switch in differentiated cells derived from iPSCs made in the lab, which has not been reported previously. The study is featured on the cover of the journal.

To get adult cells to age backward into stem cells, scientists insert transgenes into the adult cell. The transgenes awaken previously dormant genes, spurring them into action. The scientists ferry these transgenes across the cell's protective membrane by using non-infectious versions of common viruses as transport vehicles.

Katherine Barsness, MD, works with a trainee using a simulation model.

The research reveals that transgenes, which normally turn off after stem cells are induced using common laboratory techniques, can spontaneously awaken after they have differentiated into specialized cells, causing the cells to age backwards and regain their pluripotency. This transgene upregulation and reversal to an earlier cellular state may have profound implications for disease modeling methods and for the development of targeted therapies based on such models.

Examining specialized cells derived from iPSCs, the team noticed unusual cell shape and behavior, prompting them to investigate the state of proteins that are master regulators of pluripotent gene activity, particularly Nanog and C-Myc.

"We observed much higher levels of expression of pluripotency genes from the transgene than we would have expected, a clue that specialized cells, the descendants of what once were iPSCs, were on their way to becoming stem cells again," says lead author Vasil Galat, PhD, Assistant Professor of Pathology at the Feinberg School and Director of the Human Stem Cell Core Facility at the research institute.

"Transgene re-activation profoundly changes the behavior of a cell. Our results serve as a cautionary tale that this re-activation can and does occur, so cells derived from iPSCs must be vigilantly screened for transgene activity before use in disease modeling and, eventually, before cell-replacement therapy," says senior author Philip Iannaccone, MD, PhD, the George M. Eisenberg Professor of Pediatrics at the Feinberg School and director of Developmental Biology at the research institute. Co-investigators include Yekaterina Galat, Mariana Perepitchka, Lawrence Jennings, MD, PhD, and Mary J. C. Hendrix, PhD.

The work was supported by the NIH and the George M. Eisenberg Foundation for Charities.

Improving Trainees' Knowledge and Skills in Pediatric Minimally Invasive Surgery

A team of surgeons from Lurie Children's, Children's Healthcare of Atlanta, and Women and Children's Hospital of Buffalo sought to determine if simulation-based education (SBE) could improve both knowledge about and comfort with performing minimally invasive surgery (MIS).

Patient safety is among the top priorities for children's hospitals in the U.S. At the same time, a mandate to restrict work hours for physicians – also a patient safety factor – can have consequences. Pediatric surgery trainees are at risk of insufficient exposure to advanced neonatal MIS and endoscopy,

Research News (continued from page 5)

particularly for rarely seen cases. The Accreditation Council for Graduate Medical Education (ACGME) has found that the minimum requirements for proficiency in these procedures are barely met.

SBE seeks to recreate a specific clinical experience as accurately as possible, allowing practice while avoiding risk to the patient. SBE curricula give trainees the opportunity to improve cognitive performance and technical skills to gain or maintain proficiency in a procedure or operation. For over 20 years, a diverse group of pediatric surgery faculty has hosted an annual advanced MIS course for pediatric surgery trainees.

In 2014 and 2015, evaluations were distributed to participants both before and after the course, to determine self-reported experience and skill level while measuring the impact of the course on comfort and perceived skill level. The results show that before the course, participants reported a notable lack of knowledge and comfort with the majority of advanced MIS procedures. After completing the course, 80 percent of participants reported cognitive and skills improvement across all procedures, with 100 percent reporting improved knowledge for "techniques to reduce recurrence" in thoracoscopic diaphragmatic hernia (DH) repair. These improvements correlated with participants' perceived ability to perform each operation safely at their home institutions, with over 90 percent reporting either marked or some improvement across all procedures practiced.

The authors caution that the pool of participants for this study was small, and that more than 2 years' worth of evaluation completion and analysis would allow for more accurate reporting of trends. The educational courses discussed in the article, published in the *Journal of Laparoendoscopic & Advanced Surgical Techniques*, were supported by unrestricted educational grants from Boston Scientific, Just Right Surgical, Karl Storz Endoscopy—America, and Stryker Endoscopy.

Senior author Katherine Barsness, MD, is an attending physician in Pediatric Surgery at Lurie Children's, Director of Surgical Simulation, Associate

Professor of Surgery and Medical Education at the Feinberg School, and Associate Director of Clinical and Translational Research at the Manne Research Institute.

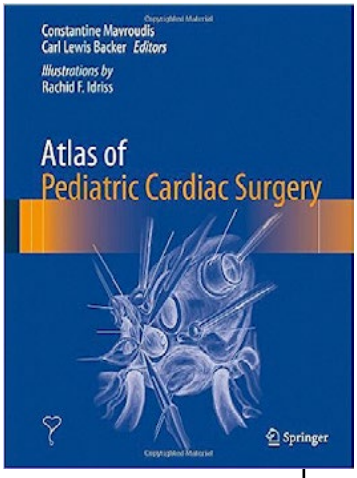
Handover from Surgery to ICU Proves Sustainable

The handover of pediatric cardiac surgical patients from the operating room to the intensive care unit is a critical and complex transition. However, this handover process can result in incomplete information transfer or technical errors. It is important that these problems be reduced to improve patient safety.

Pediatric cardiac surgical patient handover ideally involves a multidisciplinary team of nurses, surgeons, anesthesiologists, respiratory technicians, and intensive care physicians. In 2011, one such team at Lurie Children's successfully implemented a standardized multidisciplinary protocol for the handover of patients to the intensive care unit that resulted in decreased technical errors and improved information transfer. In order to test if the effect of this protocol is sustainable, the checklist of key elements related to admission that was developed in the initial study was used to monitor handovers five years after initial implementation. The results, published in *Pediatric Anesthesia*, confirm that the improved handover process substantially reduced verbal information omissions and technical errors five years after initial implementation.

The study was conducted by members of the Department of Anesthesiology and the Division of Cardiovascular-Thoracic Surgery at Lurie Children's; Department of Critical Care Medicine, The Labatt Family Heart Centre, The Hospital for Sick Children, Toronto; and the Department of Anesthesiology at the Feinberg School.

Research News (continued from page 6)



Carl Backer, MD, is a co-editor of the recently published book, Atlas of Pediatric Cardiac Surgery. This new atlas covers the breadth of congenital heart surgery and is organized by diseases and the appropriate surgical techniques. Backer is Division Head of Cardiovascular-Thoracic Surgery, Surgical Director of the Heart Transplant Program, and A.C. Buehler Professor in Surgery at Lurie Children's, and Professor of Surgery at the Feinberg School.

Congenital Heart Disease and Its Association with Other Genetic Diseases

Patients with congenital heart disease (CHD) may also have noncardiac congenital anatomic abnormalities (NC), genetic abnormalities (GA), and syndromes (S) that can influence therapeutic strategies and outcomes.

Awareness of the presence of NC/GA/S in neonates with CHD can have important implications for their treatment and prognosis, as well as for risk stratification, screening tests and counseling of parents. By understanding the prevalence of these abnormalities and their associations with specific congenital cardiac anomalies, scientists will be better equipped to focus their research efforts, and to eventually contribute to more efficient evaluation of individual patients and improved outcomes.

Researchers from Lurie Children's, the University of Michigan, Duke University, Johns Hopkins University and Florida Hospital for Children sought to determine the prevalence of important genetic and noncardiac abnormalities associated with CHD. They queried the Society of Thoracic Surgeons Congenital Heart Surgery Database (STS-CHSD) to identify neonates (younger than or equal to 30 days) who underwent index cardiac operations from 2010 to 2013.

This analysis provides empirically derived data based on multi-institutional experiences to further the understanding of the prevalence of NC/GA/S abnormalities in patients presenting for surgical repair in the first 30 days of life.

The first author of the publication, which appears online in the *Annals of Thoracic Surgery*, is Angira Patel, MD, MPH, an attending physician in the Division of Cardiology at Lurie Children's and Assistant Professor of Pediatrics at the Feinberg School. John Costello, MD, MPH, and Carl Backer, MD, are among the co-authors.

This work was presented at the 52nd Annual Meeting of the Society of Thoracic Surgeons in 2016 and received the Richard E. Clark Award for Congenital Heart Disease. The study was supported in part by the NIH.

Are Eosinophilic Esophagitis and IgE-Associated Food Allergy Linked?

Eosinophilic esophagitis (EoE) is a chronic allergic inflammatory disorder characterized by swelling of the esophagus. The numbers of child and adult patients have increased greatly in recent years. Although EoE appears to follow the pattern of other allergies and allergic reactions (atopic diseases), a clear link between it and food allergy – also called IgE-associated immediate hypersensitivity (IH) to foods – has not been established.

A group of researchers studying gastrointestinal diseases and allergic diseases at Lurie Children's and Northwestern University combined forces to determine if an association exists between EoE and IH. In a study published online in *Clinical and Experimental Allergy*, they evaluated a large retrospective cohort of pediatric patients. The researchers looked at these patients' clinical characteristics and local esophageal disease, the histology of biopsied tissues, and laboratory tests to determine differences between patients who had EoE with evidence of IgE-mediated food allergy (EoE + IH), compared to those who had EoE with no immediate hypersensitivity to foods (EoE - IH).

The researchers found that subjects with EoE + IH presented at a younger age, had higher frequencies of comorbid allergic disease, and had elevated IgE levels to various foods, while IgE values for foods identified as EoE triggers were relatively low in both the EoE + IH and EoE - IH cohorts. Take together, the findings suggest that there is a specific type of EoE that is characterized by the presence of IgE-associated immediate hypersensitivity and within which the presentation of EoE in clinical settings is altered.

First author Barry Pelz, MD, is a former fellow in the Division of Allergy and Immunology at Lurie Children's. Senior author Paul Bryce, PhD, is Associate Professor of Medicine: Allergy and Immunology and Microbiology-Immunology at the Feinberg School. This study was supported by the NIH, CURED Foundation and The Buckeye Foundation.

Former Consortium to Lower Obesity in Chicago Children (CLOCC) research assistant Anna Browar, MPH, has taken on a new role in CLOCC and will now serve as a full-time program coordinator, focusing on CLOCC's work with the Chicago Public Schools system. She also works extensively with Chicago hospitals to help them achieve the Baby-Friendly Hospital designation. Browar recently earned her master's degree in public health from the University of Illinois at Chicago (UIC) School of Public Health.

Jenifer Cartland, PhD, has been invited to join the board of the Illinois Children's Healthcare Foundation. It is the only philanthropy organization in Illinois focused exclusively on children's health. Working through grantee partners across the state, the Foundation focuses its grant making on identifying and funding solutions to the barriers that prevent children from accessing the ongoing health care they need. Cartland is Director of the Child Health Data Lab at the Manne Research Institute, Senior Director of Data Analytics Reporting at Lurie Children's and Research Associate Professor of Pediatrics at the Feinberg School.

Paul Schumacker, PhD, the Patrick M. Magoon Distinguished Professor in Neonatology Research at Lurie Children's, has been selected by the American Thoracic Society to become the Editor-in-Chief of the *American Journal of Respiratory Cell and Molecular Biology*. His term as editor will begin this October. Schumacker is an attending physician in the Division of Neonatology at Lurie Children's, Associate Director for Pediatric Research at the research institute, and Professor of Pediatrics, Cell and Molecular Biology, and Medicine at the Feinberg School.

During this year's American Psychiatric Association (APA) meeting, James MacKenzie, DO, was inducted as a Distinguished Fellow of the APA. MacKenzie is Medical Director of the Department of Child and Adolescent Psychiatry Consultation-Liaison Service at Lurie Children's and Instructor in Psychiatry and Behavioral Sciences at the Feinberg School.

Tara Gill, PhD

In July, Tara Gill, PhD, was invited to join the Alliance for Research in Chicagoland Communities (AARC) steering committee. Guided by this committee of community- and faith-based organizations, public agencies and Northwestern University researchers, ARCC supports the full spectrum of community-engaged research (CEnR), including community-based participatory research (CBPR), by providing partnership facilitation, capacity-building workshops and one-on-one technical assistance, seed grants, monthly information and resource updates, advocacy for supportive institutional policies, and other activities.

Gill is a psychologist with the Lurie Children's Center for Childhood Resilience and Instructor in the Department of Psychiatry and Behavioral Sciences at the Feinberg School. Her clinical work has focused on addressing childhood trauma, externalizing and internalizing behaviors, and at-risk youth in diverse urban settings. Her work has involved community and school partnerships, family engagement, and child advocacy. Addressing diversity and African American and Latino mental health has been a focus of her research, training and intervention.

Photo by Eileen Molony

Kelly Michelson, MD, MPH, is an attending physician in the Division of Critical Care at Lurie Children's, Associate Professor of Pediatrics and Director of the Center for Bioethics and Medical Humanities at the Feinberg School, and Julia and David Uihlein Professor in Bioethics and Medical Humanities.

- The Trust Project at Northwestern University aims to create a unique body of knowledge about Trust.
- The project features academics from across Northwestern and executives from across industries.
- Videos represent different perspectives on Trust and connect research findings to real-world scenarios.

Who Can You Trust?

by Maureen Searcy

From Northwestern Research Spring/Summer 2016

Northwestern's Kellogg School of Management, in partnership with other schools at the University, has launched the cross-disciplinary Trust Project, which aims to strengthen research, practice, and understanding of trust in business and society. Kelly Michelson, MD, MPH, is contributing her insights to the project. In one of her videos, Michelson discusses three characteristics of a trusting relationship in healthcare settings: vulnerability, motivation, and a focus on the future. By contrast, distrust in medicine might arise from a lack of familiarity, pessimism about another's intentions, or a desire to withhold judgment. Michelson is implementing her research on trust by conducting a randomized controlled trial studying the efficacy of using a navigator to support communication between parents and healthcare workers. Read more.

A Changing SNAP: Why Corner Stores Might Start Stocking More Broccoli

by Greg Trotter

From the Chicago Tribune, July 8, 2016

This February, the U.S. Department of Agriculture announced changes requiring stores that operate as part of the SNAP network to increase the number and variety of healthy food and beverage options they offer. The Chicago Tribune highlighted how these changes are affecting retailers, including the challenge of influencing community purchasing behavior. CLOCC Executive Director Adam Becker, PhD, MPH, was interviewed.

As described in the Tribune article, the Cook County Department of Public Health, in partnership with the Consortium to Lower Obesity in Chicago Children, is providing outreach and support to corner stores, with funding from the U.S. Centers for Disease Control and Prevention, to help them be successful in meeting these new federal requirements. The partners are doing this work in the south and west suburbs where there's less availability of healthy food options. A 2014 corner store assessment found that stores in African American communities in the south suburbs were far less likely to stock fresh fruits and vegetables.

"At the end of the day, it's going to come down to the local level, regardless of what (the) feds hand down. How do we support these stores and how do we support these communities in order to be successful?" asked Becker. Read the full article.

Access to Opportunities Could Reverse Chicago Violence

by Karen Sheehan, MD, MPH

From the Chicago Tribune, July 29, 2016

In a Letter to the Editor, Strengthening Chicago's Youth (SCY) Medical Director Karen Sheehan, MD, MPH, highlighted a recent data brief released by the Illinois Violent Death Reporting System. The brief shows an increase of 8.6 percent in the homicide rate in Chicago between 2005 and 2015. What is even more disturbing is that the homicide rate for African Americans was 18 times higher than Caucasians and Latinos in 2015. Sheehan calls out these disturbing inequities from the perspective of a children's doctor through the lens of health equity. She discusses the disparities in opportunities between neighborhoods in Chicago as computed by the Child Opportunity Index, "a composite community score for three domains of opportunity: educational, health/environmental and social/economic."

SCY's recent quarterly meeting focused on some of these very domains and how community development contributes to violence prevention. Panel presentations on topics such as economic development, housing, employment for youth and individuals with criminal records, and community cohesion were followed by small group discussions on action and advocacy.

From left: Stewart Goldman, MD, is Professor of Pediatrics; Jason Fangusaro, MD, is Associate Professor of Pediatrics; and David Walterhouse, MD, is Associate Professor of Pediatrics at the Feinberg School.

Endowed Positions

Recently a ceremony was held to invest three physicians into endowed positions:

Jason Fangusaro, MD, Section Head of Pediatric Neuro-Oncology, was endowed as the Gus Foundation Chair in Neuro-Oncology.

Stewart Goldman, MD, Head of the Division of Hematology, Oncology, Neuro-Oncology and Stem Cell Transplantation at Lurie Children's and Co-director of the Falk Brain Tumor Center at the Manne Research Institute, was endowed as the Meryl Suzanne Weiss Distinguished Professor in Hematology, Oncology and Stem Cell Transplantation.

David Walterhouse, MD, Section Head of Oncology, and Interim Director of the Cancer Biology and Epigenomics Program at the research institute, was endowed as the Richard A. Perritt, MD, Professor in Cancer and Blood Disorders.

Social Work Exemplar awardee Sybil Dunlap, LCSW

Social Work Exemplar Award

Sybil Dunlap, LCSW, social worker in the Center for Childhood Resilence (CCR) has been chosen as the Lurie Children's 2016 Social Work Exemplar. The award recognizes her dedication and passion to enhance the lives of youth and to expand the professional scope of social work.

Teacher of the Year Award

At the Annual Scholars' Day, Rachel Ballard, MD, received the Child and Adolescent Psychiatry Teacher of the Year Award from the Department of Psychiatry and Behavioral Sciences at the Feinberg School. Ballard is an attending physician in the Department of Child and Adolescent Psychiatry at Lurie Children's and Assistant Professor of Psychiatry and Behavioral Sciences at the Feinberg School.

Distinguished Service Awards

The Illinois High School Association recently honored Cynthia LaBella, MD, Medical Director of the Institute for Sports Medicine at Lurie Children's, with the Distinguished Service Award for her leadership on youth concussion management. LaBella is a statewide and national expert on the post-concussion "return to play" and "return to learn" policies for schools. She is Associate Professor of Pediatrics at the Feinberg School.

Santhanam Suresh, MD, Chair of the Department of Anesthesiology and director of the Pain Management Team at Lurie Children's, was awarded the American Society of Regional Anesthesia and Pain Medicine's (ASRA) Distinguished Service Award during a ceremony held in conjunction with the 2016 Regional Anesthesiology and Acute Pain Medicine Meeting. The award recognizes extraordinary and broad contributions to the science, teaching, or practice of regional anesthesia and/or pain medicine over time resulting in advancements such as the growth of a subspecialty, evolution of the knowledge base that guides practice, enhancement of education programs, significant changes in governance or the political milieu for the field. Suresh holds the Arthur C. King Professorship in Anesthesiology at Lurie Children's, and is Professor of Anesthesiology and Pediatrics at the Feinberg School.

Presidential Citation

Nancy Young, MD, received a Presidential Citation at the 149th annual meeting of the American Otological Society in May. This award was given "in recognition of excellence and innovation in program development, teaching and research in pediatric otology and cochlear implantation." The American Otological Society is one of the oldest medical societies in the U.S. Its mission is to encourage, promote, and sponsor research in otology/neurotology as well as to advance medical and surgical advances in the treatment of individuals with hearing and balance disorders. Young is Section Head of Otology/Neurotology and Medical Director of the Audiology & Cochlear Implant Program, The Lillian S. Wells Professor in Pediatric Otolaryngology at Lurie Children's, Professor of Otolaryngology - Head and Neck Surgery at the Feinberg School, and Professor and Fellow of the Knowles Hearing Center in the Department of Communication Sciences & Disorders at Northwestern University School of Communication.

About the Children's Research Fund

The Children's Research Fund is one of Chicago's leading philanthropic organizations dedicated to funding basic, translational and clinical medical research. Over the years, Children's Research Fund support has led to advanced investigation in cancer, heart disease, genetics, microbiology and neonatology. Since its affiliation with Lurie Children's in 1991, the Children's Research Fund has contributed more than $67 million.

To get the latest information on Children's Research Fund events and fundraising campaigns, please visit www.childrensresearchfund.org.

Barneys New York Shopping Event Coming This Fall

Enzo and Colleen Incandela, Sage and Kyle Kamin, and Nancy and Phillip Resnick are the co-chairs for an evening of celebration and shopping in support of the Children's Research Fund at Barneys New York, 15 East Oak Street on Thursday, October 20. Barneys will donate a percentage of shopping proceeds toward the Children's Research Fund's current commitment.

Children's Research Fund Board Members Vote on New Funding Commitment

At their June board meeting, members of the Children's Research Fund approved a commitment to fundraising for the precision medicine initiative with the proceeds of the 2016 annual campaign and Children's Ball. Precision medicine is about developing specialized treatments that combine everything known about a disease plus everything known about a specific individual who has the disease. The goal of precision medicine is more cures, less toxicity and a better quality of life.

"The Children's Research Fund has always been forward-thinking in its funding decisions," said Dave McHugh, Chair of the Children's Research Fund. "We were inspired to make a commitment to raise funds for the precision medicine initiative as part of the 2016 annual campaign after we learned that precision medicine will be a key research focus for the Manne Research Institute and Lurie Children's for years to come."

For further information or to discuss making a commitment, contact Sharon Hurwitz at 312.227.7248 or shurwitz@luriechildrens.org.

MOMENTS
Yesterday Today Tomorrow

Theme unveiled for December 3 Children's Ball

The 2016 Children's Ball co-chairs chairs, Ann and John Amboian, and Ashley Hemphill Netzky and Pam Netzky, unveiled the Ball theme at a kick-off event held at the Peninsula Hotel. "Moments: Yesterday, Today & Tomorrow" is the theme they chose to reflect both the Children's Research Fund's 25 years of support for pediatric research but more importantly to recognize all the precious everyday moments made possible for patients and families thanks to medical research and support from donors. For more information about the Children's Ball, please visit www.childrensresearchfund.org or call Katie Cerone at 312.227.7299.

Shown at top: Courtney Romba, MD
Bottom: Meghan Schott, DO

Fellow Awards

Department of Child and Adolescent Psychiatry fellows Courtney Romba, MD, and Meghan Schott, DO, presented posters at the annual meeting of the American Psychiatric Association in Atlanta on May 16.

- Romba's poster was titled A Case Study of Acute Onset of Mania in the Context of Mild Traumatic Brain Injury.
- Schott's poster was titled A Case of Clinical Confusion: When Lennox-Gastaut Syndrome Is Mistaken for an Anxiety Disorder.

Neonatology Division fellows Susan Slattery, MD, and Bimal Chaudhari, MD, MPH, have each received the Northwestern University Clinical and Translational Sciences (NUCATS) Institute Multidisciplinary Training Program in Child and Adolescent Health (TL1) to support their research and career development. Slattery's mentor is Karna Murthy, MD, Associate Professor of Pediatrics at the Feinberg School and a neonatologist at Lurie Children's. Chaudhari's mentor is Justin Starren, MD, PhD, Chief of the Division of Health and Biomedical Informatics, Deputy Director of NUCATS, and Associate Professor of Preventive Medicine and Medical Social Sciences at the Feinberg School.

Slattery also received a Department of Pediatrics scholarship to support her coursework in the Master of Health Services and Outcomes Research graduate program at the Feinberg School.

Jill Chang, MD, has received a Friends of Prentice grant to support her research. Chang's mentor is Maria Dizon, MD, Assistant Professor of Pediatrics at the Feinberg School and a neonatologist at Lurie Children's.

Why Do Motor Neurons Die in Spinal Muscular Atrophy?

The laboratory of Yongchao Ma, PhD, has found that the mitochondria in motor neurons of Spinal Muscular Atrophy (SMA) mouse models are damaged compared to those in normal mice. Mitochondria are the powerhouses that provide cells with the energy to function. These tiny organelles travel to parts of the body that need energy, returning to the cells for repair and rejuvenation. In the case of SMA, mitochondria get stuck at the meeting point between motor neurons and muscles (the neuromuscular junction), and thus can't be repaired. As the neurons die back, SMA patients' muscles become wasted. The lab tested the findings in two models, and visualized the mitochondria using electron microscopy. They also used deep genome sequencing to measure differences in gene expression between normal and SMA-affected motor neurons.

"One of the most interesting observations we made is that these effects actually happen before the disease even manifests itself," says senior author Ma. "This gives us hope that agents that protect mitochondria, and that have already been developed at the University of Southern California, can be used — in combination with other SMA therapies — to benefit patients."

The first author of the publication, appearing in *Human Molecular Genetics*, is Nimrod Miller, PhD, a postdoctoral associate in the Ma lab. *Nature Reviews Neurology* will highlight the findings in an upcoming issue. The work was supported by the NIH, the Hartwell Foundation and Whitehall Foundation.

Yongchao Ma, PhD, is Assistant Professor of Pediatrics, Neurology - Ken and Ruth Davee Department, and Physiology at the Feinberg School, and Ann Marie and Francis Klocke, MD Research Scholar and a member of the Developmental Biology Program at the Manne Research Institute.