I M P A C T





COMMUNITY REPORT 2017

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Each day at Children's Hospital of Pittsburgh of UPMC, we see the impact that our doctors, nurses, researchers, and staff have on patients. And we see the impact that our community has as well. By donating a dollar at the cash register or supporting important brain tumor research, you're changing the lives of children and families. Sometimes these changes come in bold, visible ways, like renewed life after a transplant operation or redesigned Distraction Therapy rooms.

Other times, however, the impact can only be felt: the joy that a child gets from Creative and Expressive Arts Therapy, or the relief a mother feels when a new medication shows signs of success.

In this Community Report, you'll meet a handful of people who are doing remarkable things to advance the care and cure of our kids. From conducting cutting-edge research to creating state-of-the-art facilities, we have seen that all actions, both big and small, can make a meaningful impression.

None of this could happen without support from community members like you. Every hour spent fundraising and every dollar donated has an enormous impact on our hospital and the people in it.

Therefore, it is with much appreciation that we ask you to enjoy this look back at our achievements through fiscal year 2017. At Children's Hospital, we strive to ensure that our kids are healthy and strong so that they can go into the world and make a big, positive impact.

You make this work possible.

Thank you.

Greg Barrett

J. Gregory Barrett, President Children's Hospital of Pittsburgh Foundation

Christopher Gessner, President Children's Hospital of Pittsburgh of UPMC

Christopher Dessner



How distraction therapy eases the burden of anxiety

Naomi is a strong-willed little girl with definite opinions about what she does and does not like. "She's very sweet and loving, and she's also very stubborn in scary or uncertain situations," says Jessica Bish, Naomi's mom. "Once she gets an idea in her head, there's no changing it."

THROUGH A CHILD'S EYES

Worrying about an unpleasant activity can be worse than the activity itself. Sometimes, an unfamiliar environment — like a hospital — can be a problem. For a child, these feelings are all too real, and they can have a real effect on the success of a medical procedure.

That's why Jessica was worried about her daughter's MRI. Naomi's eyes are out of alignment, and her care team wanted to find out why. Having an MRI is a challenge for anybody, but making it worse was Naomi's sudden case of poison sumac. She'd been picking blackberries, and now she was covered in itchy hives. Getting her to lie still would probably require heavy sedation, thought Jessica.

Luckily for Naomi, the entire staff at Children's Hospital of Pittsburgh of UPMC has experience finding innovative ways to make the hospital less frightening. Distraction therapy plays a big role in their ability to provide a consistently high level of care without a lot of stress.

When Naomi and her mom visited the Emergency Department for Naomi's sumac, their stress level was sky-high. But then, they happened to meet the very same physician assistant who would be handling her MRI sedation later that week. The PA saw an opportunity to make Naomi's experience better by asking a colleague from the Child Life Department to help out.



Naomi Bish benefited from distraction therapy at Children's Hospital during an MRI.



Naomi, left, with child life specialist Mia DiBagno, MS, CCLS. This fiber-optic lighting is just one example of distraction therapy at the hospital.

DISTRACTION THERAPY: HISTORY AND PRACTICE

The experts in the Child Life Department have a knack for using language that puts kids at ease, and they're also masters of distraction therapy.

Children's Hospital is a pioneer in this field. About a decade ago, the staff began looking into options for reducing the need to sedate children. They knew cooperation is a must for many procedures, and they also knew kids are really in tune with their senses. The staff figured that engaging those senses could be the key to smooth sailing during procedures.

Kids who come to Children's today are in for a nice surprise. Instead of cold, forbidding rooms full of scary equipment, they enter a pirate ship or an underwater adventure world — rooms painted and furnished in themes that let kids walk the plank or follow stepping stones to the exam table. Audio effects, fiber optic lighting, bubbles, and aromatherapy make it all come alive, and games and videos keep kids' minds occupied. Children can often visit the room ahead of time for a simulation.

PUTTING IT TO THE TEST: NAOMI'S MRI

When the day came for the imaging procedure, the Child Life specialist took Naomi through a simulation and showed her the goggles she could use to watch movies. She explained that they were going to send a special light through her arm up to her brain so they could take a picture. Naomi thought it sounded great, but Jessica was uneasy.

"I kept waiting for the therapy to backfire, but it didn't. The MRI couldn't have gone any better," says Jessica. Naomi needed no sedation at all, and today, she enjoys showing off the picture of her brain.

Susan Harvey, RN, BSN, CPN, notes that patients with ADHD, autism, or other neurological differences respond particularly well to distraction therapy. "It makes it easier for them to shift their attention to something positive," she says. "It works well for all of the kids, and even for me!" Staff members and families do appreciate the calming nature of these special rooms.

It's a plus if a trip to the hospital can be as fun as a walk in the park — and now, thanks to distraction therapy, it can be. Jessica says, "We told the Child Life specialist that if she ever doubted herself, she should call us, and we'll tell her what a blessing she is."







IMPACT

Soothing Anxious Children: How American Textile Company makes hospital visits happier

American Textile Company is a Pittsburgh-based company that supplies retailers with mattress protectors, pillows, and mattress pads — soft things that promote comfort. It's not a surprise, then, that the company would see the value in helping children find comfort while in the hospital.

Children's Hospital of Pittsburgh Foundation board member Lance Ruttenberg, who is the president and CEO of American Textile, was instrumental in the completion of the distraction therapy rooms in the Same Day Surgery Center at Children's. In March 2017, the company announced a donation of \$300,000 to bring these magical rooms to life.

Without this gift, children would face the unfriendly environment of a traditional hospital room. But because of American Textile Company, our surgical areas are a welcoming world of imagination. We, and our patients and families, are grateful for this generous and inventive support.

When a tumor grows in the brain, the consequences can be dire. The Brain Care Institute is developing novel immunotherapeutic approaches to these disruptive threats.

Charlie Vogelmann was just 7 years old when his parents and his piano teacher noticed he was squinting a lot. The Vogelmanns, who live near Milwaukee, decided to get him checked out. His doctors determined that he had an optic glioma, a brain tumor that affects the optic nerve. He'd already lost his vision in his left eye, and his right eye was beginning to show signs of failing. This would be devastating news for anybody, but it's especially bad for an active little kid.

Charlie's doctors tried to help by giving him chemotherapy, but the glioma kept growing — so much so that he developed hydrocephalus (a build-up of cerebrospinal fluid). He was losing his memory, his personality was changing, and he was sleeping 20 hours a day. Finally, his doctors decided the only option left was to remove the glioma surgically. "This is a place you never want to go," says his mother, Julie Vogelmann. "We'd been told before that the tumor was probably inoperable."



Gary Kohanbash, PhD, a neuro-oncology researcher in the Brain Care Institute, is teaching T cells to kill gliomas.

IMPACT

It takes a community to advance challenging research

While researchers across the world are working to develop more effective therapies to treat pediatric brain tumors, advanced research is expensive, and progress often frustratingly slow. Charitable gifts help to fuel the sort of breakthrough studies needed to give kids living with hard-to-treat brain tumors a fighting chance.

Here at Children's, we have a community of donors committed to accelerating our brain tumor research program. In the past year alone, our talented researchers have received support from several generous community partners, including the Shear Family Foundation, St. Baldrick's Foundation, and Connor's Cure, a WWE initiative benefiting the V Foundation. Dr. Agnihotri was also the recipient of the 2017 Children's Trust Research Award — a grant awarded by the Children's Trust, a group of emerging community leaders focused on engaged philanthropy.

With the support of a community behind them, we're hopeful that our researchers' work will lead to better treatment options for children diagnosed with brain tumors. As the old saying goes, there is strength in numbers.

IMMUNOTHERAPY VS. THE BRAIN INVADERS

Surgery is effective for some brain tumors, and chemotherapy and radiation can work in many cases, but sometimes, these approaches aren't enough.

The Brain Care Institute at Children's Hospital of Pittsburgh of UPMC brings together more than 200 experts in research and clinical care to find answers for kids like Charlie. One of those experts is Gary Kohanbash, PhD, a neuro-oncology researcher who is teaching T cells (a type of immune system cell) to kill gliomas. Along with Ian Pollack, MD, chief of Pediatric Neurosurgery and principal investigator of the Brain Tumor Vaccine Clinical Trials Program, Dr. Kohanbash is developing novel vaccines that target these tumors using T cells, which may ultimately build upon the existing vaccine strategy. T cells can recognize cancer cells by their chemical signals, so if the researchers can make the cancer cells call out to the T cells, the T cells can find and attack them. They accomplish this by adding certain peptides, or chains of amino acids, to the vaccine. The peptides then alert the T cells to the cancer cells.

HOW GLIOMAS DISRUPT THE BRAIN

"Glia" is Greek for glue, and healthy glial cells function as a sort of glue that holds the nervous system together: They help neurons make connections with each other and regulate the brain's environment. Gliomas are the result of uncontrolled glial cell growth, so they interfere with these functions by getting in the way and using up resources.

GOING FOR THE WIN

Charlie's surgery in Milwaukee resulted in the removal of about half of the tumor enough to fix the hydrocephalus, but not enough to keep worries about his vision at bay. His family knew they had to do more, so they researched their options and found something that sounded promising: a clinical trial of a low-grade glioma vaccine, led by Dr. Pollack. They came to Children's Hospital to get started on the next phase of Charlie's treatment. So far, Charlie has received 12 doses of the vaccine, and his vision has improved in his right eye. His care team tracks the glioma's size, and it's now several millimeters smaller. The glioma appears to be stable for now.

"We know the risk is that Charlie may lose his vision someday, and he's preparing by learning braille, but he's very optimistic," says Julie. "He talks about his future, and he's so sweet and kind." Now 11, he's busy having as much fun as possible while he can still see. One of his wishes was for a treehouse, so his community came together to build one for him. And the Vogelmanns enjoy their trips to Pittsburgh as well. "This city is incredibly friendly," says Julie. "This journey has had a lot of downs, but we've had plenty of ups, too."

In addition to offering treatments through clinical trials that are often unavailable elsewhere, physicians and scientists at Children's are analyzing existing data to advance the science of immunotherapy. "In cancer research, we solve our challenging problems with teamwork led by resilient scientists, clinicians, and patients," says Sameer Agnihotri, PhD, another researcher in the organization. Discovering what works is one way to fight cancer, but sometimes, figuring out what doesn't work can be just as helpful. Using gene sequencing, they're examining old samples from previous vaccine studies to understand why some kids responded to the vaccines and some did not. "Because of our long history of research at Children's, we're able to analyze many, many samples — few other institutions can match our access to such a collection," says Dr. Kohanbash. "By predicting resistance vs. response to our peptide vaccines, we're advancing the field in ways no one thought was possible several years ago."



Charlie Vogelmann is participating in a clinical trial at Children's Hospital that uses a vaccine to shrink his low-grade glioma, a type of brain tumor.





When an expert heard about a little girl with an unusual challenge to her vision, he decided to try a different approach.

When Sarah Hepner was born, the nurses noticed that her eyes seemed swollen. They decided to call a specialist — Ken Nischal, MD, chief of the Division of Pediatric Ophthalmology, Strabismus, and Adult Motility at Children's Hospital of Pittsburgh of UPMC.

"He told them he knew what was wrong and that he wanted to operate right away," recalls Sarah's mother, Krisee Jadyk.

What was wrong was that Sarah's eyes had severe glaucoma and lacked an iris, the pigmented circle that opens and closes around the pupil to protect the back of the eye from too much light. Sarah's eyes were swollen because a lot of fluid had built up back there. A gene called FoxC1 was to blame — mutations to this gene can result in neurological problems, glaucoma, or a missing iris and a broken drainage system.



Sarah Hepner and her dad, Patrick, chat at Children's Hospital, where she had cyclodiode laser therapy to mitigate the drainage problems in her eyes.



Ken Nischal, MD, examines a young patient.

INSIGHTFUL INNOVATION

Dr. Nischal is one of the world's leading pediatric eye specialists, and he has pioneered several surgical procedures just for kids. He also has a knack for applying advanced surgical techniques creatively for his pediatric patients.

Most kids with drainage problems end up with tiny tubes that carry the excess fluid away, but Dr. Nischal was concerned that without an iris, a tube could damage Sarah's natural lens or cornea. He chose instead to perform cyclodiode laser therapy, which destroys the fluid-producing part of the eye. Sarah did need a tube in one eye later on, but as she grows, her need for anything other than glasses and eye drops should decrease.

THE INDIVIDUAL APPROACH TO TEAMWORK: **OPHTHALMOLOGY AT CHILDREN'S HOSPITAL**

The Division of Pediatric Ophthalmology is innovative in its day-to-day operations.

"The big thing that sets us apart is our emphasis on consensus," says Dr. Nischal. "We all sit down together to decide how to manage our most common cases." Treatment protocols ensure consistent care no matter which physician happens to be on duty. But it's what happens next that really sets the group apart: During the first consultation, the attending physician determines who on the team can best help the patient instead of automatically taking that patient on.



By sorting their patients this way, they can be sure each child is receiving the depth of care that he or she needs. It also means that each physician handles many more cases in his or her niche than the others.

"For instance, Dr. Sara Otaibi is our nystagmus expert," says Dr. Nischal. "We've all done nystagmus cases, but she's seeing five cases a week versus my five cases a year. She's one of only a handful of dedicated experts in this field. If I get a patient who needs an expert in nystagmus, that patient is in luck. And if one of my colleagues sees a child with cataracts, I'll get that patient, because that's what I do."

TECHNOLOGY? THAT'S PART OF THE PICTURE.

Because they're experts with leading-edge tools, the team can offer technologically advanced treatments that other institutions can't. Dr. Nischal cites the intraoperative patients benefit.

Sarah Hepner

OCT microscope, which allows the physician to examine optical crosssections at a microscopic level during surgery. Children's is the only pediatric hospital in the United States to have a dedicated device. With many advanced devices, there's a sharp learning curve, but high volumes have permitted Dr. Nischal to flatten that curve — and his

SEEING INTO THE FUTURE

Today, Sarah is thriving, and she can see. "She loves to look at Daniel Tiger, and she loves to go to day care, and there's nothing holding her back," says Krisee. Eventually, Sarah may get special contact lenses that simulate irises, but for now, her mom says, "Nobody notices there's something missing. They just see somebody special."

IMPACT

Retired teacher gives back to help kids with vision impairment

Retired Upper St. Clair shop teacher Charlie Fischer has been giving to the hospital for more than two decades. Together with his late wife, Mary Ellen, Charlie established an endowment to support the hospital's greatest needs in 1997.

After battling his own vision issues for many years, Charlie opted to direct his giving to Children's a little differently this past year — giving a gift in support of the Vision **Enhancement Resource** Fund — a fund focused on providing exceptional care to children with vision challenges and their families. In donors like Charlie, we see the difference that one person can make.



OUTSMARTING **SMART BUGS**

How complications from the flu spurred a researcher into action

It was a particularly bad year for the flu, and John Williams, MD, found himself caring for two 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, a serious complication that results in death up to 30 percent of the time. 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 didn't.

"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."



John Williams, MD, whose team at Children's analyzes information about viruses and evaluates the efficacy of vaccines.





COMMON GERMS CAN MEAN BIG TROUBLE

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

"In the developing world, respiratory infections and diarrhea kill more kids than malaria, tuberculosis, and AIDS put together," says Dr. Williams, chief of the Division of Infectious Diseases at Children's Hospital of Pittsburgh of UPMC. In the U.S., respiratory and gastrointestinal infections do take a toll in terms of missed workdays, hospitalizations, and trips to the emergency room. And for a kid with a weak immune system, even a cold can be deadly.

Not many medicines can fight these infections, so vaccination is the best bet — 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.

NARROWING DOWN THE THREAT

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

Dr. Williams in discussion with a colleague.

Surveillance Network (NVSN), which collects and analyzes information on respiratory and gastrointestinal viruses and evaluates the effectiveness of vaccines. Children's Hospital will focus on disease data from Allegheny County and other areas they serve.

Children's is one of only seven institutions nationwide participating in this surveillance project. The information the researchers gather from keeping an eye on disease outbreaks will help quide health policy 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. As for the flu, the NVSN is a critical component of national pediatric flu surveillance. The leadership of the NVSN has led to the development of flu vaccine policies across the country.

The NVSN project aims to classify and track each strain of respiratory infection so that scientists can then target those germs specifically, with vaccines, immunotherapy, or combinations of these approaches. There has already been some success with this approach in the development of yearly flu vaccines. 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.

IMPACT

A helping hand from the Hillman Foundation

In addition to the NVSN project, the Division of Infectious Diseases benefits from the generous support that accompanies Dr. Williams's appointment as the Henry L. Hillman Endowed Chair in Pediatric Immunology, an endowment established in 1988 with a gift from the late Henry Hillman. The endowment provides a legacy of support that will help to advance scientific discovery for generations.

Federally sponsored research has its limits, and that's where philanthropic funding comes in. In a traditional 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 investment, the investigative team can take their work in different directions.

For philanthropic investors, it's a good bet — the product they're investing in is better pediatric heath, and our team has already demonstrated leadership and success in this area. At Children's, this support allows us to function flexibly and freely, with no locked doors or dead ends.

Mentors, Motherhood, and Much, Much Nore

Family Care Connection is one way neighbors nurture one another. Because of it, so many lives are so much better.

Keiana Hampton was stuck. A young mother, Keiana had recently lost her own mom and was struggling emotionally. Her mom had been her rock, and now, with her sixth baby girl on the way and some health issues, Keiana needed a helping hand.

Keiana's physician referred her to Family Care Connection, an arm of Children's Hospital of Pittsburgh of UPMC that provides social services to families who need a bit of assistance. Operating five centers throughout the city of Pittsburgh (soon to be six), Children's Hospital established Family Care Connection as a way to extend its role as a care resource beyond the purely medical.



IMPACT

The Rona Jaffe Foundation promotes an early love of literacy

Rona Jaffe was the author of sixteen books, including the New York Times Bestseller, The Best of Everything. So it seems only fitting that the foundation she established before her death in 2005 should support emerging writers and early literacy programs.

For the past 10 years, the **Rona Jaffe Foundation** has invested in Children's Family Care Connection (FCC) Centers. Thanks to the foundation, the FCCs provide a series of literacy programs, ranging from a kindergarten readiness camp to an annual literacy event that typically welcomes about 100 kids and parents. We are so thankful for the foundation's part in encouraging a lifelong love of learning through early literacy. With the support of donors like the Rona Jaffe Foundation, we strive to give every child we serve the very best chance to thrive.



THE STRENGTH TO OVERCOME BARRIERS IS WITHIN YOU.

Charlotte Byrd is the manager of Family Care Connection, and she believes strongly in its mission. "I'm drawn to this work because I know the types of barriers that people, especially women, can face," she says. Once a single mother herself, she came back to Pittsburgh from Atlanta because her own family was here — and she needed their support.

"Challenges can happen to anyone," says Byrd. "About 70 percent of single mothers in Allegheny County live in poverty, and poverty brings with it barriers to access to education, to housing, to good nutrition, to the basic tools that enable us to be the best parents we can be."

Barriers can be emotional, too. Keiana Hampton was distraught that her kids wouldn't grow up knowing their grandmother, and she was facing her own illnesses on top of that. At Family Care Connection, she began working with a nurse and a child development specialist, who taught her that taking care of her own health would benefit her daughters as well. "They were so kind and understanding," says Keiana. Together, they scheduled dentist and doctor appointments and started figuring out the girls' school-year strategy. As Keiana began to trust her team more deeply, she also began looking forward to their visits to her home.

WELCOMING FRIENDS, WARMING HEARTS

"We visit with many of our clients at their homes, and although some are hesitant at first, we find that establishing trust is the key to achieving success," says Byrd. "By banking that time, we're able to focus on challenges as they arise." Social and emotional care can help parents understand their kids throughout their ages and stages, and it can also include more concrete assistance like action plans for going back to school or finding transportation.

Family Care Connection also encourages friendships between families. Parentchild interaction groups are opportunities for moms, dads, and kids to forge strong social bonds. Anne Marie Kuchera, MS, MA, RD, LPC, who serves as the director of Children's Hospital Community Health Services, says, "the work we do with our families empowers them to take the lead in their own lives. Children's has a long history of being engaged in our communities, and Family Care Connection is a way we can take care of people where they live, learn, and play."

Family Care Connection promotes educational opportunities, too. The organization runs a robust kindergarten readiness program that prepares kids for success in school as well as all-ages literacy events and science activities. Butterfly hatching kits, an educational series about Native Americans, and pen-pal relationships with kids from Kenya are just a few of the ways the children of Family Care Connection learn more about the world — and themselves.

Over time, Keiana developed a strong bond with her mentors at Family Care Connection. "They're the nicest people I've ever met in my whole entire life," she says. "If I ever need somebody to talk to, I can talk to them. I feel blessed." She began working at a nearby day care, and her strong work ethic led to her taking online classes at Post University. What's next? "I'd like to own my own day care," says Keiana.

She's setting a fine example for six young women, and she's an inspiration to everyone she meets — and Family Care Connection helped make it all happen. ■



Pictured here are Keiana Hampton's daughters. First row, left to right: Ny'Onna, Nyla, and Na'Kayla Jeter. Second row, left to right: Nya, Nariha, and Nijha Jeter.



Ms. Byrd and Diane Mannarino at Children's Family Care Connection in Braddock.



THE GHON GOON

Transplant patient Katie Wilkinson dreams of seeing her name in lights. While she was in the hospital, the Creative and Expressive Arts Therapy Program helped keep her spirits up.

Katie Wilkinson is a committed 20-year-old singer and dancer — fiercely committed. "It's my passion. My dream is to be on Broadway," she says. With a production of the Green Day musical American Idiot already on her theatrical résumé, she's pursuing that passion — but even with such ambitious goals, she's already faced a harder road than many aspiring stars.

When Katie was born, her doctors in Wisconsin discovered she had a rare digestive disease: megacystis microcolon intestinal hypoperistalsis syndrome (MMIHS). It's painful, it has no real cure, and it can cause blockages in the intestine. Basically, her digestive system just didn't work.

Katie's care team in Wisconsin did their best, but they soon realized she would need a multivisceral transplant: a new small intestine, stomach, pancreas, and colon. Children's Hospital of Pittsburgh of UPMC is one of the few institutions in the United States that can perform a complicated operation like this, so Katie found herself headed to Pittsburgh.



Katie Wilkinson, who received a transplant and lymphoma treatment at Children's, benefited from the hospital's Creative and Expressive Arts Therapy program.

HEALING AND HOPING

Long and repeated hospital stays are no fun — but art can help. "I'd never heard of a hospital offering music before," says Katie. "And it made every single bad day go a little bit better." Music therapy was her daily break — she spent a lot of time singing at the piano and working on making her voice stronger.

The Creative and Expressive Arts Therapy (CEAT) Program is just one of the ways the people of Children's Hospital treat the whole child, not just the disease."Our program is individualized to each patient and family," says Kory Antonacci, one of the program's two music therapists. "When a patient comes to us, we help them create something that helps them understand what's going on." The program includes two art therapists as well, and the team serves everybody in the hospital. "We dance down the hall with our patients when they've having a good day, and we write songs with their families about what they're going through," says Kory.

Scott Maurer, MD, who specializes in pediatric hematology/ oncology, recalls an art project that incorporated a baby's footprints. Another one of his patients learned to play the home," she says. ukulele. "Really cool stuff," he says.

Just like talk therapy, art and music therapy provide kids with an outlet to express themselves. Creative therapy can cheer them up, too. "Kids see professional after professional in the hospital with scary-looking machines, but when we come in with the art cart or a guitar, everything changes," says Kory. "The beauty of it is that you don't even have to be good at art — it's the process that counts, not the product."

INVESTMENT? ARTVESTMENT!

"Physicians have known for a long time how closely the mind and the body are connected, and studies have proven the link between a patient's emotional state and the ability to respond to medical treatment," says Dr. Maurer. "Therapy, especially if it speaks to the heart, can aid in healing. CEAT has had a dramatic effect on our patients, and expanding the program will allow us to offer this life-changing service to even more families."

SOMEDAY SOON: BROADWAY, VIA PITTSBURGH

A few months after Katie's transplant in 2015, she was diagnosed with lymphoma. Over the years, she's spent a lot of time at Children's — but she says the best of it was with her therapists, creating music and working on strengthening her singing voice.

"I hadn't even considered it before, but now that I'm feeling so much better, I am going to college," says Katie. Her plan is to transfer next year to Carnegie Mellon University to study musical theatre. "Pittsburgh is already my second



All in a day's work: art therapist Kate Gibson and Scott Maurer, MD.





All in a day's work: music therapist Nicole Steele.

IMPACT

Building a Masterpiece of Hope

This year, Children's Hospital of Pittsburgh Foundation launched the Masterpiece of Hope Campaign to generate funds for Creative and **Expressive Arts Therapy. Led** by co-chairs Ramsey Lyons and Sloan Overstrom, and with honorary chair Joe Manganiello, the Masterpiece of Hope Campaign centers on bringing the healing power of the arts to more kids and families than ever before. Already, the campaign has committed gifts from many generous families and local foundations.

With the continued support of community members like you, we hope to completely reimagine our Creative and **Expressive Arts Therapy** program, incorporating a brand new in-hospital broadcast studio and a **Creative and Expressive Arts** Hub featuring a pottery nook, theater space, new music and art studios, a design center/ maker space, and more! Together, we can build a true masterpiece of hope for our kids. To join the *Masterpiece* and give hope to children and families, please visit givetochildrens.org/CEAT.

All in a day's work: art therapist Katie O'Connor.

FINE-TUNING THE STANDARD OF CARE IN MIDDLE MIDDLE EARA R INFECTIONS

How Children's Hospital of Pittsburgh of UPMC continues to change the way the world treats acute otitis media

> Minimalism is trendy, and "less is more" is often the most stylish option. But researchers at Children's Hospital have discovered that when it comes to antibiotics, sometimes more is more.

> "The National Institutes of Health (NIH) has been trying to promote a reduction in the use of antibiotic therapy, and that has been a challenge," says Alejandro Hoberman, MD, chief of the Division of General Academic Pediatrics, president of Children's Community Pediatrics, and the Jack L. Paradise Endowed Professor of Pediatric Research at Children's Hospital.

> Dr. Hoberman and his team are tackling that challenge by studying how ear infections in kids respond to antibiotics and whether the length of treatment makes a difference. (Here's a hint: It does.)



Alejandro Hoberman, MD, has studied ear infections in children throughout his entire career, continually improving upon available treatments.

EAR INFECTIONS 101



Dr. Hoberman and Mary Ann Haralam, CRNP.

More than 2 million kids in the United States are diagnosed with acute otitis media (AOM, or ear infection) every year. It's the #1 reason doctors prescribe antibiotics to children.

In addition to distress, poor sleep, and potential complications, AOM can lead to missed workdays, higher prescription costs, and more visits to health care providers. Another concern is the ever-increasing ability of bacteria to resist the drugs that have worked for years. Once a bug has beaten a drug, there's no going back.

So what's the best way to handle AOM?

ANTIBIOTICS: BATTLING THE BUGS

Dr. Hoberman and his team conducted a study that showed AOM treatment with antibiotics for 10 days reduced the time it took for kids to feel better. This established that antibiotics do work against AOM, but 10 days is a long time.

Taking the NIH recommendation to heart, the team at Children's decided to test the effects of decreasing the amount of antibiotic exposure from 10 days to five. With the support of the NIH, they devised and conducted a clinical trial, which was later published in the New England Journal of Medicine. The study clearly showed that the shorter course of antibiotics did not work as well as the 10-day treatment — and half of all kids who still had fluid in the ear after the short course ended up with recurring infections, too. Five days just wasn't long enough.

For now, the evidence suggests that young children with AOM should receive the standard duration of antibiotic therapy. Dr. Hoberman and his team are also exploring new ways of reducing overdiagnosis of AOM. "We're looking forward to providing tools to refine and enhance our diagnostic procedures," he says.

A PIONEERING HISTORY, WITH HOPE FOR THE FUTURE

Dr. Hoberman has been looking for new solutions to childhood infections since he arrived at Children's in 1989 to work with his mentor, Jack Paradise, MD.

By 1989, Dr. Paradise had been conducting internationally recognized research regarding the management of tonsil and adenoid and middle ear disease for more than a decade. Among other studies, his results showed that in children who continued to develop infections and fluid in the middle ear after undergoing insertion of ear tubes, adenoidectomy provided appreciable benefit. Among remaining questions were the optimal treatment of ear infections with various antibiotics and the possible complications.

Dr. Hoberman and his team continue their research into pediatric ear infections as well as other common conditions so that kids receive the most effective, evidence-based treatments available.

THE PARADISE PROFESSORSHIP

Dr. Paradise is a Professor Emeritus of Pediatrics at the University of Pittsburgh School of Medicine and still an active researcher in his 90s. The Jack L. Paradise Endowed Chair in Pediatric Research is a tribute to Dr. Paradise and his groundbreaking work as one of the founders of the research program at the hospital. Supported by the National Institutes of Health, this endowment stems from an initial gift of \$500,000 from SmithKline Beecham and \$1 million in other philanthropic donations.

As the first recipient of the Paradise Professorship, Dr. Hoberman is pleased to continue his mentor's work.

IMPACT

Donors like you help to advance compassionate care

More than 125 years ago, Children's Hospital was founded with a promise of care for every child. Today, Children's continues this commitment to children's health and well-being thanks to donors like you.

When you give to Children's, you support our efforts to ensure that every child receives the compassionate, research-based care he or she needs. Charitable gifts help to offset the cost of free and uncompensated care, contribute to innovative patient care initiatives, and further help to fuel cuttingedge research studies studies just like Dr. Hoberman's.

For all that donors like you do to make the world better for this generation of children and the generations to come, we thank you.



LIVING HOPC: Changing the face of transplant medicine

When a little girl with a rare disease needed expert care, her physician reached out to the Hillman Center for Pediatric Transplantation.

> When Kennedy Stevenson visited the Clinic for Special Children in Strasburg, Pennsylvania, her physicians diagnosed her with an extremely rare genetic disorder. They knew she'd need the help of a specialist, and they knew who to call.

> Kyle Soltys, MD, is a transplant surgeon at Children's Hospital of Pittsburgh of UPMC who travels frequently to Strasburg to follow up on his patients. He collaborated with Kennedy's other doctors, and they agreed that a liver transplant could correct some of the factors contributing to Kennedy's rare disease.



Kennedy Stevenson, recipient of a living-donor liver transplant that was the only viable therapeutic option for her extremely rare AdoHcy deficiency.

IMPACT

Children's champions Cindy and Rob Citrone advocate for transplant patients

Although she currently resides in Connecticut, Pittsburgh native and Children's Hospital of **Pittsburgh Foundation** board member Cindy Citrone remains closely connected to her hometown - and Children's Hospital is an important part of that connection. This year, Cindy, her husband, Rob, and their four children, joined Children's transplant team to support Starzl's Trailblazers, a Walk for Children's staff team focused on raising critical funds for pediatric transplantation. The family committed \$50,000 to the effort. Cindy and Rob's adult son, Nick, participated in the event, walking shoulder to shoulder with our transplant specialists and patient families.

Transplant has always been important to the Citrones. In fact, the family is partnering with Pittsburgh sports teams — including the Steelers, Pirates, and Penguins — to launch an organ donation awareness fundraising and advocacy campaign called Play it Forward Pittsburgh. Children's champions like the Citrones help to ensure that Children's will always be here for every child!

WORKING TOGETHER TO MAKE THE FUTURE BRIGHTER — FOR KIDS, AND FOR FAMILIES

Collaboration is one of the hallmarks of the Hillman Center for Pediatric Transplantation. The physicians at the center have always shared their expertise with doctors from other hospitals. George Mazariegos, MD, chief of Pediatric Transplantation at Children's, notes that the team is forging a new standard of care for pediatric transplant — one that's based on what works. "We're analyzing the variations in care and assessing the outcomes. One of the ways we do that is by training others," he says.

The center has expanded its reach, partnering with hospitals in Virginia and Florida. By traveling to partner institutions, transplant physicians from Children's can provide expert care while also sharing their expertise.

This sort of partnership, which brings patients and experts together to find solutions, is the future of the program. Physicians at Children's also collaborate long-distance via telemedicine both before and after transplants and other procedures to keep patient care consistent. Through these partnerships, physicians from Children's can share their expertise across the country while keeping patients and families close to home.

CHILDREN'S: THE LEADER IN PEDIATRIC LIVING-DONOR LIVER TRANSPLANTATIONS

Kennedy's condition, S-adenosylhomocysteine hydrolase (AdoHcy) deficiency, affects brain and muscle development along with the liver. AdoHcy is in charge of energy transfer and protein metabolism — and the liver won't work without it. Fewer than eight other people in the world have ever been diagnosed with this condition, which means it's pretty much off the radar of the deceased organ-donor matching system. Her only viable option was a living-donor liver transplant.

Children's has performed more living-donor liver transplants than any other pediatric program in the United States, according to the United Network for Organ Sharing (UNOS). Furthermore, Children's ranks highest in the U.S. for pediatric liver transplant according to 2017 data released by the Scientific Registry of Transplant Recipients, involving 1-year overall patient and graft survival, 1-year living-donor patient and graft survival, and 1-year deceased donor graft survival.





Dr. Mazariegos and Kennedy. Dr. Mazariegos leads the Pediatric Transplantation program at Children's, whose pediatric liver transplant survival rates rank highest in the nation according to the Scientific Registry of Transplant Recipients.

WHEN KENNEDY'S TEAM CAME TOGETHER, HOPE SOARED

Finding a live donor isn't easy, so Kennedy's mother, Donya McCoy, reached out to her friends on Facebook for help. An old classmate stepped up: Mike Thompson, a firefighter whose own child had once been very sick. After extensive testing, Donya, Kennedy, and their "extended and blended" family traveled with Mike and his family to Pittsburgh for the procedure, performed by Drs. Mazariegos and Soltys.

A LIVING MIRACLE, AND A GENEROUS SPIRIT

Now, 6-year-old Kennedy is thriving, and Donya feels fortunate. "She's such a happy, playful, loving child — you'd never know she's gone through anything serious," she says. The support of her family and the gift that Mike gave to Kennedy made the experience a positive one, in the end.

"Kennedy is doing well and so is our program," says Dr. Mazariegos. "Our discoveries have brought about exciting innovations in transplant, like immune monitoring and immunosuppression management tools that help us to personalize the care we provide. We're revolutionizing the future of transplant medicine, right here and right now."

George Mazariegos, MD

BIG-LEAGUE BRAVERY

One child's experience at the Heart Institute

Owen Taylor, a 10-year-old baseball player from the Bedford area, was born with congenitally corrected transposition of the great arteries, an extremely rare condition in which the heart's ventricles — or pumping chambers — are reversed. The arteries that connect to the ventricles are reversed, too. Normally, the stronger left ventricle pumps blood to the body, and the smaller right ventricle pumps to the nearby lungs. When they're reversed, the stronger left side gets the easier job of pumping to the lungs, and the right ventricle is charged with supplying blood to the rest of the body. This can cause the right ventricle to wear out.

"We didn't know Owen had this condition until he was 2 months old," says Tracy Taylor, Owen's mother. "And then suddenly we were on the rollercoaster ride that is life with congenital heart disease."



Owen Taylor, recipient of a heart transplant at Children's, wearing his game face.



Victor Morell, MD, leads the Pediatric Cardiothoracic Surgery Division at Children's and was Owen's transplant surgeon.

THE TAYLORS CHOSE THE LEADER IN CONGENITAL HEART DISEASE CARE

The Heart Institute at Children's Hospital treats more than 17,000 patients a year with congenital heart disease and is recognized as among the top pediatric cardiovascular surgery programs in the U.S. Children's has one of the lowest overall four-year surgical mortality rates among all high-volume programs (1.7 percent) and was awarded a 3-Star rating by the Society of Thoracic Surgeons*, one of only 11 programs to receive this distinction. Nationally, the average mortality rate for all pediatric cardiovascular programs was 3.1 percent during the same reporting period.

Victor Morell, MD, chief of the Division of Pediatric Cardiothoracic Surgery and surgical director of the Heart Institute, took on Owen's case. Dr. Morell has particular expertise in congenitally corrected transposition of the great arteries, and everybody else at the Heart Institute was also ready to go to bat for Owen.

STRONGER TOGETHER

The team at the Heart Institute includes more than 170 experts who are committed to innovation and teamwork. Together, they manage every type of heart symptom and perform challenging surgeries, including heart and heart-lung transplants. Although they handle extraordinarily challenging cases like Owen's, they still achieve exceptional outcomes thanks to a willingness to share information.

This focus on teamwork is one element that makes it possible to accept rare cases like Owen's with confidence. But the team knows that not every family lives close enough to Pittsburgh to take advantage of this expertise, which is why the program is branching out. In 2014, Dr. Morell helped establish a partnership with St. Joseph's Children's Hospital in Tampa, Florida. Children's experts provide support to patients, families, and caregivers at St. Joseph's both in person and via telemedicine.



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TRAINING FOR THE BIG DAY

The complex surgery for Owen's condition involves correcting the way blood flows through the heart. But before the surgery could happen, Owen needed some other procedures. Always a good sport, Owen relied on his resilience to get through them. "He's always been able to put on his game face," says his dad, Bryan.

Unfortunately, during his surgery Owen suffered cardiac arrest. Dr. Morell tried to give his heart a break by placing him on ECMO, or extracorporeal membrane oxygenation, but ECMO wasn't enough. Owen's heart didn't just need a break — it needed to be replaced. "Everybody took time out of their day to visit Owen and make him smile. He told everybody he wanted to get back to playing baseball, and they put together a plan to make that happen," says Bryan.

"We spent a lot of time at Children's," Tracy adds. "Even though it was not a happy time, we were able to make some happy memories." ■



Dr. Morell and Lauren Sambolt, RN

THE JOURNEY HOME

After several weeks on a pediatric ventricular assist device (or VAD), Owen, who was 9 years old at the time, received a heart transplant.

*Society of Thoracic Surgeons, 2012–2016

IMPACT

Honors: Victor Morell, MD

Dr. Morell was recently installed as the Eugene S. Wiener Endowed Chair in Pediatric Cardiothoracic Surgery. The chair was established with contributions from the Pittsburgh community and a matching gift from UPMC.

This position honors the memory of pediatric surgeon Eugene S. Wiener, MD, who served as the hospital's chief medical officer from 2001 until 2006. A respected surgeon and an excellent teacher, Dr. Wiener was also an exemplary leader who played a key role in the development of the hospital's Lawrenceville facility. Throughout his 34-year career, he was known first as a compassionate caregiver who devoted his life to caring for children and their families.

Dr. Morell is honored to share in the legacy of this visionary leader and fellow caregiver.

Owen Taylor

FOUNDATION BY THE NUMBERS

WE ARE GRATEFUL TO OUR COMMUNITY, ALL OF THE INDIVIDUALS, BUSINESSES, AND FOUNDATIONS WHOSE SUPPORT HAS MADE A DIFFERENCE IN CARING FOR KIDS AND FAMILIES.

FY16 Donation Totals **BY AREA OF SUPPORT**

(FY16 was July 1, 2015 through June 30, 2016.)



Capital/Facilities	\$444,942
Division/Program Support	\$ <mark>5,048,980</mark>
Research	\$5,919,515
Uncompensated Care	\$1,788,437
Unreimbursed Services	\$1,931,188
Unrestricted Support	\$7,011,616

Uncompensated Care helps Children's Hospital fulfill its mission of caring for every child regardless of his or her family's ability to pay.

Unreimbursed Services represents the money raised for services for patients and families that are not covered by health insurance, such as Child and Family Life, the Ronald McDonald Care Mobile, Family Care Connection Centers, the School Program, and Supportive Care.

Unrestricted Support directs funds toward the hospital's greatest needs.





GIVING SOCIETY DONORS LeMoyne Society: \$1,000 to \$9,999 annually Children's Circle of Care: \$10,000 or more annually

(July 1, 2015 to June 30, 2016)







31,160 IOTAL NUMBER OF DONORS

(July 1, 2016 to June 30, 2017)

35,167 IOIAL NU

FY17 Donation Totals **BY AREA OF SUPPORT**

(FY17 was July 1, 2016 through June 30, 2017.)

Capital/Facilities	\$5,519
Division/Program Support	\$4,044,087
Research	\$2,261,189
Uncompensated Care	\$1,730,194
Unreimbursed Services	\$3,012,217
Unrestricted Support	\$7,193,868

Uncompensated Care helps Children's Hospital fulfill its mission of caring for every child regardless of his or her family's ability to pay.

Unreimbursed Services represents the money raised for services for patients and families that are not covered by health insurance, such as Child and Family Life, the Ronald McDonald Care Mobile, Family Care Connection Centers, the School Program, and Supportive Care.

Unrestricted Support directs funds toward the hospital's greatest needs.



BECAUSE OF YOUR GENEROSITY, WE WERE ABLE TO REINVEST RESOURCES BACK INTO OUR LOCAL COMMUNITY, PROVIDING THESE TOTAL COMMUNITY BENEFITS IN 2016.

TOTAL COMMUNITY BENEFITS FY16



\$12.5m \$11.1m

\$10.3m

Free and Uncompensated Care Support of Scientific

Research Projects Community Benefit

\$34.2m

Programs Support of Graduate Medical Education Programs

FISCAL YEAR 2017 COMMUNITY BENEFITS NUMBERS WILL BE PUBLICLY REPORTED IN JANUARY 2018

STAYS, VISITS, AND PROCEDURES FY17

















FISCAL YEAR 2016

HOSPITAL AND PHYSICIAN OUTPATIENT VISITS: 1,121,407 EMERGENCY AND EXPRESS CARE VISITS: 136,220

SURGICAL PROCEDURES: 23,660 **INPATIENT STAYS: 21,321**



THE MANY WAYS YOU GIVE

Our generous donors never fail to amaze us — from beard shaving to clay shoots, donors to Children's Hospital of Pittsburgh Foundation continue to come up with creative ways to fundraise in support of the hospital. Check out just a few of the many inventive ways supporters like you make a difference:



LUKE'S CHOIR JAMBOREE

Luke's Choir, a nonprofit organization dedicated to raising funds and awareness for those diagnosed with congenital heart disease, hosted a jamboree this March that raised more than \$8,000 to support the Heart Institute at Children's Hospital. Luke's Choir was started by the Victor family in honor of their 1-year-old son, Luke, who has had two heart surgeries since birth.

EMILY BASARA'S FULL MARATHON

Team Children's marathoner Emily Basara marked two special milestones this spring: her 30th birthday and her fifth marathon. To mark this momentous year, Emily joined Team Children's and raised \$4,200 for the hospital. According to Emily, "In honor of these celebrations, I wanted to give back to a charity that means the world to me."



SOUTH FAYETTE GLOW RUN

This June, students at South Fayette High School hosted their fourth Glow Run fundraiser. The annual run/walk gives participants of all ages the chance to experience a glow-in-the-dark themed course that wraps around the South Fayette School District campus. Since 2014, the Glow Run has raised more than \$77,400 to support the Free Care Fund at Children's. Thank you, South Fayette High School!



MAD VIKING'S

BATTLE OF THE BEARDS

Mad Viking's Battle of the Beards is an annual

charity beard competition. This year's event was

held at Jergel's Rhythm Grille and featured 15

distinct beard contest categories! The fourth

annual event raised more than \$7,250 to support

the hospital's greatest needs. 🔳





SQUATS FOR TOTS

Organized by St. Vincent College professor Nicholas Racculia, PhD, SSC, the inaugural Squats for Tots Team Children's lift-a-thon sponsored by Iron City Athletic Club raised \$4,200 to support Children's. The event featured 30 athletes, including participants from St. Vincent College's Bearcat B.E.S.T. program, which benefits young adults with learning and developmental disabilities, as well as residents from Acme Providers Inc., a Greensburg-based nonprofit that enriches the lives of adults with intellectual and developmental disabilities. A big thank you to the strong men and women who lifted our kids' spirits with their contributions!



AADE APPALACHIAN BASIN CHAPTER SPRING SHOOT AND APPALACHIAN BLAST

The American Association of Drilling Engineers (AADE) Appalachian Basin Chapter has been raising funds for Children's since 2009. These engineers know how to have fun with annual Spring Shoot and Appalachian Blast events. The group has raised a total of \$248,000 for Children's to date - this year, donating funds to benefit Child Life.



BIDS FOR KIDS

Vincentian Academy graduates Alex Sturgis and Gia Sunseri centered their senior project on fundraising for Children's. Through Bids for Kids, Alex and Gia generated more than \$7,220 for the hospital's greatest needs.



CITIZENS HOSE FIRE AND RESCUE COMMUNITY DAY

Local heroes from the Citizens Hose Fire and Rescue hosted a Community Day in Natrona Heights on May 7, 2017 in support of Children's Division of Pediatric Hematology/Oncology. The event featured vendors, live music, a car show, and lots of other family-friendly activities. In total, the festivities raised \$4,050 for our kids and families.



PENNSYLVANIA STATE FRATERNAL ORDER OF EAGLES

This year, multiple Fraternal Order of Eagles (F.O.E.) Aeries and Auxiliaries throughout Pennsylvania fundraised through the F.O.E.'s President's Project. Their collective efforts contributed more than \$38,800 to Children's diabetes program.

GOLF FOR A CURE

After his daughter Meredith was diagnosed with neuroblastoma, Bruce Berman decided to do something to help kids facing cancer. Together with his friends Rick Platt, Brad Aurila, and Tommy Meyers, Bruce organized Golf for a Cure, a daylong golf marathon fundraiser. After 12 hours on the course this June, the friends raised a total of \$20,000 in support of pediatric cancer research at Children's. Bruce continues to fundraise in honor of Meredith, who is now cancer-free.

MEET A FEW OF **OUR HEROES**

It's nothing short of heroic when an individual gives of him- or herself to help kids in need. And this year, we had a lot of heroes. In 2017, 35,167 community members like you donated to Children's Hospital. That's 35,167 generous souls who invested in our mission to give kids a chance to be kids. Meet just a few of those who inspire us with their generosity:



ESTELLE HARRIS

Famous for her role as Estelle Costanza on "Seinfeld" and her portrayal of Mrs. Potato Head in "Toy Story," Estelle Harris is an accomplished actress and a treasured figure in American pop culture. And Estelle is also a generous donor to Children's Hospital. Estelle made a gift to the hospital after her beloved greatgrandson, Avery, was treated here at the Hillman Center for Pediatric Transplantation. Little Avery is currently awaiting a multiorgan transplant.



JEAN M. TERSAK, MD

Children's oncologist Dr. Jean **Tersak** finds her inspiration to give in the lives of those she serves. "I believe in the mission of the hospital and the tremendous commitment of those who serve within its walls. We strive to make the difficult days the best they can be for our patients and families. I am inspired by all that I see around me through my colleagues, patients, and families."



THE WOZNIAKS

Children's Trust members Ashlev and Andrew Wozniak have been giving to Children's for several years. The parents of three small children, the Wozniaks recognize the importance of investing in the future of pediatric medicine. As Andrew explains, "We support research because we want to give promising young investigators the chance to conduct pioneering studies that will pave the way for larger grants in the years to tome." ■



THE DAVIDSONS

Despite many miles of distance, the Davidsons consider Children's to be like a second home. "Being far away from home, the Children's team surrounded us from the moment we entered through their doors. It felt like family," Marissa Davidson explains. "We give back because Children's helped our son heal and helped us gain confidence about his future. He is a healthy and active young man and we are 🛚 grateful." 🔳



RHONDA NORMAN

Rhonda Norman of Ellwood City has been a loyal supporter of Children's Hospital for more than 20 years. Together with her late husband, Dennis, Rhonda has made the hospital not only a part of her annual charitable contributions, but also a beneficiary of her estate. We continue to be so grateful for steadfast community champions like Rhonda.



THE FOSTERS

The Foster family (Peter Foster pictured with his care team at Children's) contributes to the transplant program here at Children's because they understand firsthand the impact of pioneering pediatric medical care. According to Nancy Foster, "Children's doctors, nurses, researchers, and staff save and improve the lives of kids and families every day. They saved the life of our son, Peter, 17 years ago and have sustained and supported him ever since."



THE BALLS

The Ball family gives to help ensure that Children's will always be a place of hope and healing for kids and their families. As manager of patient experience at Children's, Sarah Ball recognizes that charitable contributions help to support the sort of special enhancements that simply aren't covered by insurance. "My family and I donate to help ensure that staff have the tools to focus on 'the kid part of the kid' — giving our patients the extra layer of support they need to



THE GALLEYS

For the Galley family, their giving to Children's is guite personal. "Two of our three children have type 1 diabetes," John Galley explains. "Our kids are now dependent on insulin injections five or more times per day to survive." So John and his wife, Lori, donate in support of diabetes research. "The care we have received at Children's has always been great," John continues, "but we contribute to diabetes research at the hospital because our hope is that this work will one day result in a cure."



THE SPECKS

The Specks give to help families in need. As Susan Speck describes, "Less than a week after our son was born, we were informed that something was wrong. He was taken by ambulance to Children's where he had his first heart surgery. We expected the best cardiac care and we got it. What we didn't expect was how doctors and nurses would care for us. Now, we give to Children's so that we may help to lift some of the burden that other families must bear."

HIGHLIGHTS & FEATURES



ATTRACTING THE BEST

For the second time, Children's earned prestigious Magnet® recognition granted by the American Nurses Credentialing **Center.** The Magnet Recognition Program recognizes health care organizations for quality patient care, nursing excellence, innovations in professional nursing practice, and recruitment and retention of nurses. Under the leadership of Diane Hupp, DNP, RN, chief nursing officer and Heather Ambrose, DNP, RN, director of Nursing, Children's passed a rigorous and lengthy process to receive the redesignation.

Magnet recognition is the highest honor an organization can achieve for nursing excellence, and organizations must reapply every four years to maintain their designation.

Out of more than 6,300 health care organizations nationwide, only 449, or about 7 percent, have achieved Magnet designation status. Research shows that Magnet facilities report higher satisfaction rates, have more engaged staff, and deliver better clinical outcomes.

Children's Hospital has more than 1,400 nurses on staff.

Children's achieved its first Magnet designation in July 2012.

TOP 10 ONCE AGAIN

For the eighth year in a row, Children's was named in the top 10 of the U.S. News & World Report Honor Roll of American's Best Children's Hospitals. This year, we were #9 overall, and we ranked in 10 of 10 specialties — including four in the top 10.

MOVING TO THE RIGHT BEAT

Five schools hosted dance marathons, raising over \$313,000 for Children's Hospital. Joining the University of Pittsburgh this year were North Allegheny Senior High School, North Hills High School, Penn-Trafford High School, and Peters Township Middle School, bringing in over \$63,000 in new revenue. As hundreds of students moved and grooved, donations rolled in, benefiting initiatives including Hematology/Oncology, Pennies from Heaven, the Free Care Fund, and the hospital's greatest needs. The University of Pittsburgh saw a 25 percent increase in fundraising over last year and has raised more than \$600,000 since the 2014-2015 academic year. Thanks to all of the participants for giving (and dancing) with their whole hearts.

- University of Pittsburgh \$250,187.73
- North Allegheny Senior High School \$33,402
- North Hills High School \$4,320
- Penn-Trafford High School \$4,397.58
- Peters Township Middle School \$21,139.69



10 ROCKIN' YEARS

DVE Rocks for Children's Radiothon had a rocking 10th year on September 28, and 29, 2017. The decade-long fundraiser has brought in more than \$5 million in giving throughout its history. This year's event featured live performers, on-air talent, and families sharing their stories to raise money for patients and families at Children's Hospital. Now that rocks!

TEAMING UP TO TREAT EATING DISORDERS

Children's Hospital and Western Psychiatric Institute and Clinic of UPMC have expanded their care for kids and teens battling eating disorders. Now, younger patients can receive outpatient treatment at Children's Pine Center in Wexford. The treatment team includes psychiatrists, psychologists, therapists, dietitians, and nurses, all of whom have specialized expertise and experience treating eating disorders. Multiple levels of care are available for patients.

THE KEY TO SAFER DRIVING

Children's received a \$35,000 grant from The Allstate Foundation to support the "FOCUS — Action Against Distraction Driver Simulator Program." The program, which launched in 2008, educates teen drivers on the consequences of distracted and impaired driving. Teens ages 16 to 19 are three times more likely than older drivers to be in a fatal crash. The FOCUS program reaches 40 schools and teaches hundreds of teens ways to improve their driving habits.

INSPIRING KIDS

Camp INSPIRE hosted its fourth annual summer program for kids and teens with complex medical conditions, including those with tracheostomies or who use ventilator and BiPAP machines. The overnight camp is a collaborative effort between Children's and The Woodlands Foundation to give children with complex medical needs the ability to experience summer fun with others facing similar medical issues. Campers participated in adaptive basketball, archery, swimming, arts and crafts, a zip line, and even hot air balloon rides.

TERRIFIC TRANSPLANTATION OUTCOMES

In 2017, the Hillman Center for Pediatric Transplantation at Children's was recognized by the Scientific Registry of **Transplant Recipients (SRTR) for outstanding outcomes** in pediatric liver transplantation for one year overall patient and graft survival as well as one year living-donor patient and graft survival. In the SRTR's three-tier rating system, Children's was the only hospital to earn a "better than expected" rating for pediatric liver transplants.

HEART AND SOUL

For the 27th year, the Dr. Bill Neches Heart Camp for Kids, in association with Children's, opened its cabins to over 120 kids ages 8 to 17 with heart disease. The weeklong camp gives kids the chance to meet others with the condition while enjoying summer activities like swimming, fishing, arts and crafts, and stargazing. Campers also attend "Ask the Doctor" sessions in which they can interact with medical staff in non-clinical settings. "Heart Camp provides an environment where kids experience something amazing along with the medical staff, which strengthens those bonds," says Matthew Zinn, DO, a cardiologist at Children's Heart Institute.

CREATING INCLUSIVE SPACES

For the second time, the Human Rights Campaign Foundation recognized Children's as a "Leader in LGBTQ Healthcare Equality." As one of only 303 recognized health care facilities nationwide, Children's strives to create a space in which all individuals and families feel welcome. The recognition is based on four key areas: foundational elements of LGBTQ patient-centered care, LGBTQ patient services and support, employee benefits and policies, and LGBTQ patient and community engagement.



GIVING THE GIFT OF CARE

The 63rd Annual Free Care Fund Benefit show raised \$1.7 million in donations and pledges in 2016 to support the hospital's Free Care Fund. Each year, thousands of children benefit from the fund, which provides families from our region with free and uncompensated care. This year's benefit event included three junior hosts, all of whom are patients at Children's. The kids hosted live segments and were interviewed on the radio broadcast where they announced the total amount raised. The broadcast was held December 15 at Children's Hospital and PPG Wintergarden and played on KDKA-TV and NewsRadio 1020 KDKA.



BIG STEPS FORWARD

The second annual Walk for Children's gathered more than 4,000 walkers who raised over \$800,000 on June 3, 2017 to benefit Children's Hospital. This communitycentered event celebrates the patients and families who have been cared for at Children's. The walk commenced with a Patient Champion Parade, where patients from past and present, wearing their Patient Champion medals, marched behind a ceremonial flag bearing the signatures of inpatients at Children's.

TRANSLATIONAL PSYCHIATRY MAY 2017

A recent study found that depression is more common in adolescents than was previously estimated and that girls experience depression more often than boys. A collaboration among Children's Hospital of Pittsburgh of UPMC, the RAND Corporation, and the Intramural Research Program of the Eunice Kennedy Shriver National Institute of Child Health and Human Development found 36 percent of adolescent females and 14 percent of adolescent males experience depression. Elizabeth Miller, MD, PhD, lead author and chief of the Division of Adolescent and Young Adult Medicine at Children's, said more work needs to be done to understand why so many girls experience depression and what can be done to connect young people with appropriate mental health services. This research was supported by a grant from the National Institute on Minority Health and Health Disparities (R01MD010274) and by the Intramural Research Program of the Eunice Kennedy Shriver National Institute of Child Health and Human Development.

A current study, run by Terence Dermody, MD, chair of the Department of Pediatrics at the University of Pittsburgh School of Medicine and Vira L. Heinz professor, shows that intestinal viruses can cause the immune system to overreact to gluten and trigger the development of celiac disease. Using two different reovirus strains, Dermody and his team showed that genetic differences between viruses can change how they interact with the immune system. A recent paper outlines the possibility of an infection with reovirus, a common but otherwise harmless virus, triggering the immune system to respond to gluten in a way that may lead to celiac disease. The study further implicates that vaccines could one day be used to prevent celiac disease and type 1 diabetes.

Researchers at Children's Hospital of Pittsburgh of UPMC and University of Pittsburgh School of Medicine developed a blood test to help clinicians identify infants who may have bleeding of the brain from shaken baby syndrome. The serum-based exam, which is undergoing testing, would be the first of its kind to detect bleeding of the brain. The study's senior author, Rachel Berger, MD, MPH, chief of the Child Advocacy Center at Children's, said the test could supplement clinical evaluation and help physicians decide whether an infant needs brain imaging. The team collaborated with Axela, a Canadian molecular diagnostics company, to develop the test. Axela's automated testing system allows the researchers to measure biomarkers using a very small sample of blood.

PEDIATRICS FEBRUARY 2017

A study led by Amy Houtrow, MD, PhD, MPH, chief of the Division of Pediatric Rehabilitation Medicine at Children's, revealed that poverty status plays an important role in the prevalence of three common chronic medical conditions: asthma, attention deficit hyperactivity disorder, and autism spectrum disorder. Researchers analyzed data from the National Survey of Children's Health for the years 2003, 2007, and 2011-12, and found children living in poverty are at a higher risk for these conditions. The team concluded that there is a need for more research on the adverse effects of poverty on children to make informed decisions about their health and well-being.

NEW ENGLAND JOURNAL OF MEDICINE B DECEMBER 2016

With an increasing concern over antibiotic resistance, Alejandro Hoberman, MD, chief of the Division of General Academic Pediatrics at Children's, led a study that tested 10-day and 5-day antibiotic courses for kids with acute otitis media (AOM). AOM is a bacterial infection of the middle ear behind the ear drum, which causes painful inflammation. Three out of four children experience this infection within their first year, and it is the most common reason kids are given antibiotics. Hoberman and his team randomly assigned 520 children to either a standard 10-day course or shortened 5-day treatment with antibiotics. The results showed that the 10-day course was far more effective. The landmark trial conducted by Children's Hospital of Pittsburgh of UPMC and the University of Pittsburgh School of Medicine found that when treating children between the ages of 6 and 23 months with antibiotics for ear infections, a shortened course has worse clinical outcomes and does not reduce the risk of antibiotic resistance.



PUBLICATIONS

At Children's Hospital of Pittsburgh of UPMC, basic, translational, and clinical research is helping to shape future improvements to pediatric treatments and therapies for sick children not only in western Pennsylvania, but around the world. On these pages, you'll find a sample of the important research our teams have published in leading scientific journals this year.

SCIENCE APRIL 2017

JAMA PEDIATRICS APRIL 2017

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Children's Hospital of Pittsburgh of UPMC wouldn't be among the nation's top children's hospitals without strong, compassionate leaders at our helm. The Boards of Trustees for Children's Hospital and Children's Hospital of Pittsburgh Foundation consist of accomplished volunteers dedicated to improving the health and well-being of children everywhere.

In FY17, the Children's Hospital of Pittsburgh Foundation Board of Trustees welcomed new members who add tremendous skills, knowledge, and heart to the Children's team. Our thanks to these leaders for the time and talent they have invested in our kids and families!

CYNTHIA L. CITRONE

Cindy Citrone is the founder and chief executive officer of the 33 Foundation, which is focused on engaging community stakeholders to contribute to the success of education, health, and human service programs. In addition to her work with the Children's Hospital of Pittsburgh Foundation Board of Trustees, Mrs. Citrone serves on the Breast Cancer Research Foundation Board of Directors, the MD Anderson Cancer Center Board of Visitors, the Elon University Board of Trustees, and the AIND/Giant Steps School for Autism Board of Directors. Mrs. Citrone graduated magna cum laude from The Ohio State University with a degree in occupational health and is a licensed occupational therapist. She and her husband, Rob, reside in Connecticut with their four 🖕 children. 🔳

ALBERT J. NEUPAVER

Albert J. Neupaver is the chairman of the board of Wabtec Corporation, where he previously served as chief executive officer. Mr. Neupaver was an officer of nuclear submarines for the U.S. Naval Academy from 1972 through 1977. He went on to serve in the U.S. Naval Reserves for the next 25 years, retiring as a captain in 2002. In addition to holding a bachelor's degree from the U.S. Naval Academy, Mr. Neupaver holds two master's degrees from the University of Pittsburgh. He serves on the boards of the Carnegie Science Center and the Carnegie Museums of Pittsburgh, as well as Koppers and Genesee & Wyoming. He and his wife, Barbara, reside in Venetia and have three adult children and 🛛 eight grandchildren. 🔳

Dena Rantin Lamar is the vice president of GetGo Cafe & Market and Giant Eagle Express. With over 20 years of market experience, Mrs. Rantin Lamar is responsible for the overall operational success and people leadership for the GetGo banner. GetGo Cafe & Market and Giant Eagle Express operate in Maryland, Pennsylvania, West Virginia, Ohio, and Indiana. Prior to Giant Eagle, Mrs. Rantin Lamar worked as the regional general manager for Pennsylvania for Walmart Corporation. Mrs. Rantin Lamar is a graduate of North Carolina A&T State University, is Green Belt Certified and Black Belt Certified in Project Management, and holds a project management certificate from Northern Virginia University. Mrs. Rantin Lamar, her husband, Martin, and their daughter, Kennedy, reside in Cranberry Township.

DENA RANTIN LAMAR

SLOAN OVERSTROM

Sloan Overstrom is a designer and co-owner of Mecox Gardens, a home, antiques, and design store in Shadyside. She is a graduate of Mount Holyoke College in Massachusetts. Mrs. Overstrom currently serves as co-chair of the foundation's Masterpiece of Hope Campaign. Together with her husband, she previously served on the host committee for the foundation's 125th Anniversary Gala. Mrs. Overstrom is an associate of the Society of Memorial Sloan Kettering Cancer Center and serves as chair of the Director's Council of the Museum of the City of New York. She formerly served as chair of the Frick Collection's Young Fellows Steering Committee, New York City. Mrs. Overstrom and her husband, Alexander, reside in Pittsburgh and have two children.

JOSEPH M. MANGANIELLO

Joseph M. Manganiello is a talented actor, producer, director, and author. He has appeared in numerous films and television series, including True Blood, Magic Mike XXL, Sabotage, Pee-wee's Big Holiday and How I Met Your Mother. Mr. Manganiello previously served as honorary chair for Children's Hospital of Pittsburgh Foundation's 125th Anniversary Gala. He currently serves as the honorary chair for the foundation's Masterpiece of Hope Campaign. A Pittsburgh native and graduate of the Carnegie Mellon University School of Drama, Mr. Manganiello often makes it back to Pittsburgh for Steelers and Penguins games and served as the narrator for the Penguins' 50th anniversary documentary Pittsburgh is Home. He currently resides in Los Angeles with 🖕 his wife, Sofía Vergara. 🔳

KEVIN M. RABBITT

Kevin M. Rabbitt is chief executive officer of NEP Group, the leading provider of total technical solutions serving the broadcast and live events industries. With operations across North America, Europe, Asia, Australia, and the Middle East, NEP is the technical partner to content producers for live sports, award shows, concert tours, music festivals, and other events. Mr. Rabbitt holds an MBA from Harvard Business School and a bachelor's degree from Rice University. While at Rice, he was captain and point guard for the men's basketball team, which competed in the Southwest Conference, Mr. Rabbitt is passionate about youth sports and is a regular basketball and soccer coach for his children. He enjoys spending time with his wife, Emily, and their four children.

























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