

TEXAS CHILDREN'S HOSPITAL ANNUAL REPORT 2015



Texas Children's
Hospital®



At first glance, Jeston Adams looks like a typical 8-year-old on his way to school, yet his backpack isn't filled with books. Instead, he carries battery packs and a controller for the small device which sits inside his chest to keep his failing heart pumping. A team of congenital heart surgeons at Texas Children's Hospital implanted a ventricular assist device (VAD), the HeartWare HVAD®, into Jeston as he awaits a much-needed heart transplant.

Born with multiple heart defects, Jeston underwent his first heart surgery at just 6 months old. Although limited in his activity, the boy from Louisiana with a love for football is able to continue with life outside of the hospital thanks to critical advancements in congenital heart disease care.



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Texas Children's Hospital is a not-for-profit organization dedicated to providing a healthier future for children and women throughout our global community by leading in patient care, education and research.

If you have any questions about our Annual Report, please call 832-824-6521 or email exgavidi@texaschildrens.org.

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Mark A. Wallace

When I look back at our achievements in 2015, I am so proud of the amazing work that Texas Children's does every day to give our patients and their families the best chance at a bright and healthy future.

Our mission is compelling – to create a healthier future for children and women throughout our global community by leading in patient care, education and research. But it is our people and their unrelenting passion for innovation that make a profound impact in the way we fulfill our mission. Our surgeons, physicians, scientists and frontline staff are constantly pushing the envelope, searching for better ways to optimize patient care and outcomes for children and women. We are also fortunate enough to have both visionary leaders and generous philanthropic donors who share in our mission, culture and values and help us transform bold ideas into pioneering innovations to advance health care for children and women around the world.

In our 2015 annual report, you will see how our surgeons are collaborating with engineers to develop novel medical devices that could revolutionize the field of pediatric

urology and fetal surgery. Other compelling examples of innovation include our use of 3-D printing to improve surgical outcomes; the success of our global Ob/Gyn residency program that uses novel teaching models to train residents in Malawi; and our strategic efforts to optimize systemwide patient flow to ensure no child is ever denied care at Texas Children's Hospital.

In 2015, we also opened our special isolation unit at Texas Children's Hospital West Campus. It is the first of its kind in Texas and the southwest and is among only a few in the U.S. designated to treat children with highly contagious infectious diseases. And now, we are building Texas Children's Hospital The Woodlands and have started work on our inpatient care tower at our medical center campus to improve the care we provide to our most critically ill patients.

This is all happening because of a strategic vision for growth, the structural leadership and support to advance that vision, and, most importantly, because of our people who drive and fulfill the vision tirelessly every day.

To celebrate them and our collective successes, I took my One Amazing Team tour last summer, visiting all of Texas Children's locations throughout Greater Houston. The whirlwind, 73-stop tour took more than three months, covered about 800 miles and touched nearly 2,000 Texas Children's staff and employees.

Everyone I met on our tour was passionate about their work at Texas Children's. It gave me even more confidence about the growth we will experience in the next few years as we continue to meet the needs of our patients and their families.

We truly are one amazing, innovative team.

A handwritten signature in black ink that reads "Mark A. Wallace". The signature is fluid and cursive, with a long horizontal stroke at the end.

Mark A. Wallace
President and CEO, Texas Children's Hospital





The News



On February 17, 2015, a team of more than 40 clinicians from at least seven specialties spent 26 hours performing an operation that would separate conjoined twins, Knatalye and Adeline Mata.



TEXAS CHILDREN'S DESIGNS STATE-OF-THE-ART SPECIAL ISOLATION UNIT TO TREAT INFECTIOUS DISEASES

When an unprecedented Ebola outbreak in West Africa began to reach other countries in fall 2014, Texas Children's faced the challenge head on. Leaders at the hospital knew that if children were affected by the event or any other emerging infectious disease their families would seek care at Texas Children's Hospital.

"The fact is, because Texas Children's Hospital is a tertiary and quaternary children's hospital, if children are suffering from these highly contagious or emerging infectious diseases, they will end up with us," said Texas Children's Physician-in-Chief Mark Kline, MD. "Therefore, we have to be prepared to give them the highest quality care in the safest manner possible."

In less than a year, Texas Children's built a state-of-the art special isolation unit to provide the highest quality care and treatment for infants and children with serious or life-threatening infectious diseases. The eight-bed unit, housed at Texas Children's Hospital West Campus and part of an 18-bed expansion of the hospital's acute care unit, is the only one of its kind in Texas and the southwest region. It is among only a few in the United States designated just for children.

In addition to the unit, Texas Children's assembled a special response team composed of professionals from across the organization who volunteered to provide specialized care to children with or suspected of having a highly contagious

infectious disease. Each member of the team participates in comprehensive ongoing training.

“Having the best qualified people running the special isolation unit is key to its success,” said the unit’s associate medical director Gordon Schutze, MD. “That’s why everyone involved has been specially trained in infection control, hospital epidemiology and management of infectious diseases in a special care setting.”

As a result of Texas Children’s willingness to immediately respond to a looming issue, the organization has garnered accolades from and the attention of other health care peers interested in creating a more robust approach to handling emerging infections. And the state of Texas and the Centers for Disease Control and Prevention designated Texas Children’s Hospital as one of several pediatric Ebola treatment centers nationwide.



Brett Giroir, MD, a member of the Texas Task Force on Infectious Disease Preparedness and Response and a formidable expert in life science strategy and innovation, said he could not be more impressed with Texas Children’s desire to run toward issues of critical importance to the health and wellbeing of the children of Texas and our nation.

Representatives from four children’s hospitals across the country have sought the expertise of Texas Children’s special response team and special isolation unit leaders, attending regular educational conferences focused on the advanced concepts of pediatric biocontainment at Texas Children’s.

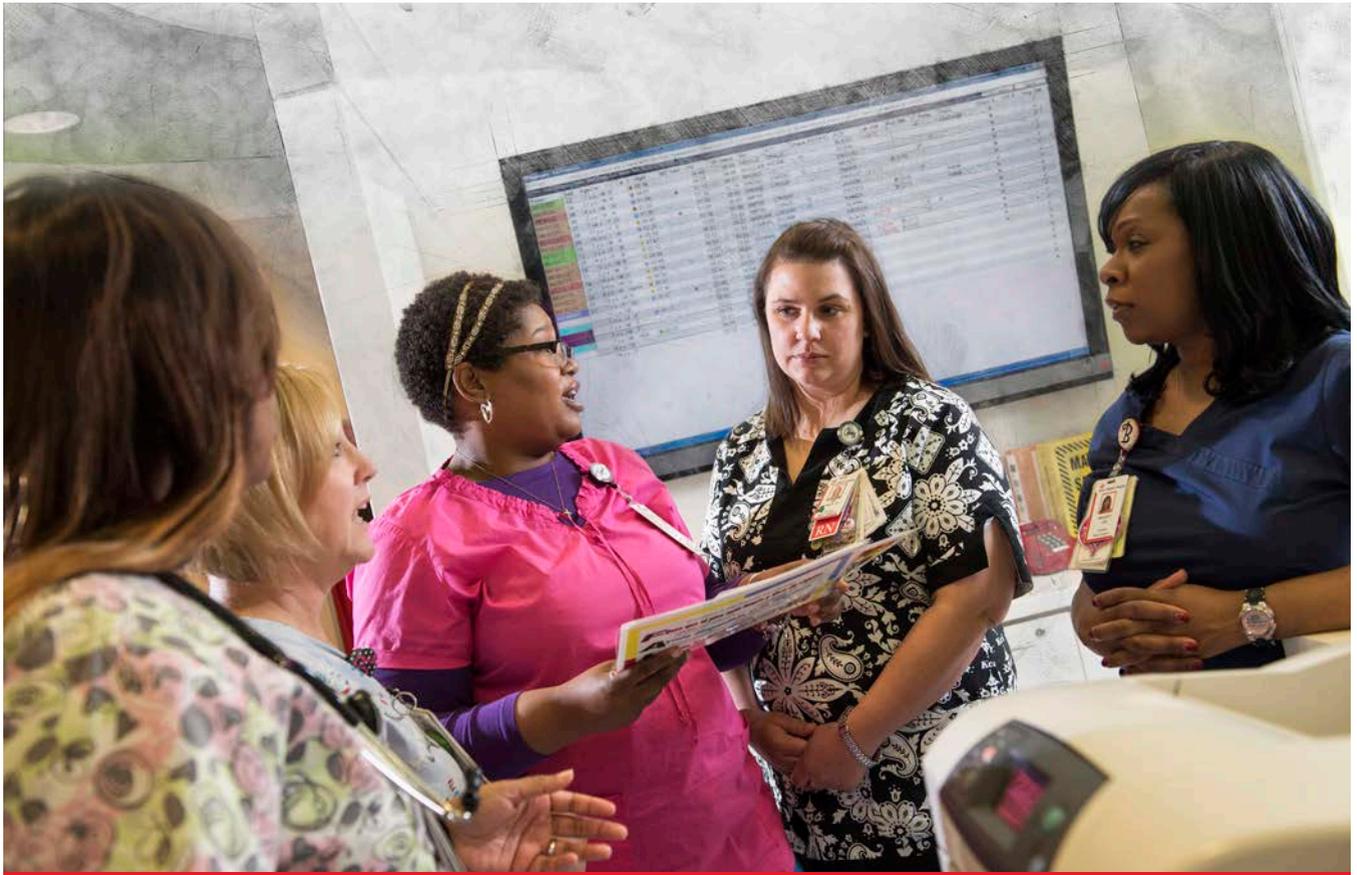
“The conferences are a wonderful opportunity for Texas Children’s to share our knowledge and experience with leaders from multiple organizations,” said Amy Arrington, MD, medical director of the unit. “We hope to continue this process for years to come in an effort to ensure all children affected by special pathogens are safely cared for in their time of need.”

To further that goal, Arrington is leading a newly formed section of medicine at Texas Children’s called Global Biologic Preparedness. The section’s focus is overall preparedness, education and research for all serious biologic threats, including emerging infectious diseases, bioterrorism and chemical/radiation threats.

Texas Children’s Hospital West Campus President Matt Schaefer said he is honored to say that when problems such as highly contagious infectious diseases affect our community and our children, Texas Children’s always leads and does not shy away from those who need us the most.

Schaefer added that the special isolation unit and special response team would not have come to fruition without the support of so many, such as Texas Children’s Board of Trustees. Texas Children’s President and CEO Mark Wallace and The Lauren and Lara Camillo Family Trust, which provided a generous \$1 million gift to support the new unit.

“People really make the difference and have made the difference for us with this unit,” Schaefer said.



NURSING CO-LEADS COLLABORATIVE, SYSTEMWIDE EFFORTS TO OPTIMIZE PATIENT FLOW

Nurses at Texas Children’s are natural innovators. They ask questions, ponder processes and think creatively or “outside the box,” as improving patient care and outcomes often depend on these fine-tuned skills.

That penchant for thinking resourcefully is what helped Texas Children’s nurses successfully navigate the organization’s seasonal surge last fall. Between October and March, Texas Children’s typically experiences a surge in patient volumes, and during this busy time of year, patient census has reached historic highs – at or beyond the hospital’s 671-bed capacity – resulting in some children being denied the opportunity to receive care at Texas Children’s.

In fiscal year 2015, nursing collaborated with administrative leaders, physicians, clinical and nonclinical support staff across the system to strategically access the organization’s previous approach to patient flow decision-making. Realizing that managing real-time capacity is crucial to predicting and planning for current and future demands, several innovative strategies and new interdisciplinary roles dedicated to patient flow were implemented.

“We began thinking about patient flow as a system-level issue,” said Clinical Director of Patient Flow Jennifer Sanders, RN. “We no longer approached the PICUs at our medical center campus and Texas Children’s Hospital West Campus as

separate units. Instead, we monitored patient flow across the system, accessing the capacity between these units and other inpatient care units when deciding on the best place to send a child for care.”

Texas Children’s also changed the way it activated census alerts. Previously, census alerts were based on color codes – green, orange and red – with “red” indicating no beds were available. These triggers were based on the percentage of bed capacity filled but did not necessarily take into account daily admissions and discharges.

“When we moved to a single census alert, we were either on capacity alert or not,” said Vice President of Nursing Jackie Ward, RN. “If we reached a point where our capacity was challenged, we would activate census alert in order to mitigate not having any beds available. This process helped us proactively manage patient flow across the acute care areas of the hospital rather than reacting to it.”



Besides having rotating teams of operational leaders and physicians focused on patient volume every day, a “real-time demand and capacity” process was created to assess patient flow at three pivotal points during the day – 9 a.m., 1 p.m. and 9 p.m. These meetings helped leaders and staff

more accurately forecast bed capacity, manage demand and capacity mismatches and resolve patient discharge barriers. A new role – chief resident of patient flow – was also created to assist with eliminating medical barriers to discharge.

“We looked at how many patients were being admitted and discharged, the total capacity of the system and focused on discharging patients effectively, efficiently and with accountability,” said Medical Director of Patient Flow Michelle Lyn, MD. “We maximized team communication and served as their support system on the back end.”

Coupled with these new processes, Texas Children’s successfully increased acute care capacity with the opening of a 10-bed acute care holding unit and a renovated 16-bed acute inpatient care unit, both located at Texas Children’s medical center campus.

“This was a huge collaborative team effort,” Sanders said. “From our administration to our nurses, providers, ancillary services, respiratory, and our facilities and environmental service teams, we worked together to ensure we delivered on our promise to make Texas Children’s the best possible place to give and receive care.”

To meet the growing number of children seeking care in the future, Texas Children’s capacity will expand even more with the addition of Texas Children’s Hospital The Woodlands – scheduled to open in 2017 – and the 19-floor inpatient critical care tower at Texas Children’s medical center campus, slated to be completed in 2018.



TEXAS CHILDREN'S GLOBAL OB/GYN PROGRAM TRAINS RESIDENTS IN MALAWI, IMPROVES PATIENT CARE

With the remarkable medical innovations in obstetrics and gynecology, the news of a woman becoming pregnant is ordinarily met with delight. Little thought is given to the possibility of maternal mortality.

While that is the reality for women in the U.S. and other developed countries, doctors at Texas Children's Hospital and Baylor College of Medicine's Department of Obstetrics and Gynecology have partnered with the American College of Obstetricians and Gynecologists – and other universities and medical organizations around the world -- to make this the reality for women in Malawi, Africa.

Boasting a population of approximately 17.3 million, Malawi is a landlocked nation in sub-Saharan Africa and is ranked the fifth poorest country in the world. The country's maternal mortality ratio is staggering – 546/100,000 live births compared to the rate of 21/100,000 live births in the U.S.

Centralized in Malawi's capital city of Lilongwe at Kamuzu Central Hospital, Texas Children's and Baylor's Global Women's Health Initiative (GWHI) is aimed at reducing mortality rates related to pregnancy and childbirth, and improving women's overall obstetric and gynecological health. A large part of this program focuses on training Malawian medical residents

so they are equipped with the knowledge and critical resources necessary to deliver high-quality obstetrical and gynecological care to the women of Malawi.



“Before the residency training program began, all postgraduate trainees in Ob/Gyn had to leave Malawi to obtain their specialty training,” said Texas Children’s Ob/Gyn-in-Chief Michael Belfort, MD “Through our partnerships with the Malawian government, the University of Malawi College of Medicine and other international partners, we implemented the first Ob/Gyn postgraduate training program in Malawi.”

Prior to the creation of the GWHI, physicians from Texas Children’s and Baylor were on the ground in Lilongwe providing medical care to pediatric patients suffering from HIV/AIDS. During that time, Susan Raine, MD, vice chair for Global Health Initiatives, OB/Gyn Residency Program director at Baylor; Jeffrey Wilkinson, MD, Fellowship director, Global Women’s Health, Obstetrics and Gynecology, Baylor; and Grace Mary Chiudzu, MD, director of Obstetrics and Gynecology, Kamuzu Central Hospital, discussed viable solutions to counter the country’s staggering maternal mortality rate. Through collaboration and procurement of funds, the GWHI emerged.

“This partnership was organic,” said Raine, whose initial role with the Global Women’s Health Initiative was operational in facilitating the onset of the Ob/Gyn postgraduate program. “It was a need meeting an idea meeting a reality.”

Raine stresses the value in helping Malawians achieve self-sufficiency, while being able to receive medical training in

Malawi instead of going to other countries.

“Our first class of residents started in late 2012 and will complete the program in 2017,” Raine said. “It has been an incredible experience to watch this program grow.”

Providing care in low resource areas while garnering similar results as if operating within a high resource setting is an ongoing matter doctors confront while instructing residents in training. The daily patient flow in Kamuzu is similar to hospitals that operate in a high resource setting but Kamuzu is challenged by a number of adverse circumstances, such as the lack of basic supplies, blood, antibiotics and basic surgical equipment.

“It is almost like being in a war zone at times,” said Wilkinson, whose primary focus has been helping Malawian women undergo safe motherhood and optimal gynecological health.

Although the gynecological and obstetrical conditions seen in Malawian women are universally encountered by all women despite their geographic location, Wilkinson cites postpartum hemorrhage, infections due to poor sanitary conditions, and obstetric fistula as the chief causes of maternal mortality rates being extreme in this region.

“We’ve implemented approaches and protocols for treating the effects of certain conditions we frequently see,” Wilkinson said. “For example, women who would otherwise have lifelong deformities from obstetric fistula can undergo surgical remedies, such as vaginal reconstruction or, if necessary, urinary diversion.”

Texas Children’s and Baylor doctors involved with the work of the GWHI have partnered with the Department of Pediatrics Global Health Team in Lilongwe to introduce a prenatal clinic for teenagers who acquired HIV at birth.

“The clinic provides teens with proper treatment to prevent the HIV virus from being perinatally transmitted to their children and also quintessential emotional and social support,” said Joseph Sclafani, MD, associate professor of Ob/Gyn at Baylor who is presently working at Kamuzu. At present, there are plans to develop a high-risk pregnancy center and a critical care unit that will be supported with philanthropic funds bestowed to the GWHI to advance this specific cause.



TEXAS CHILDREN'S SHAPES THE FUTURE OF PATIENT CARE THROUGH 3-D MODELING

In the months leading up to the historical separation of conjoined twins Knatalye and Adeline Mata, a multidisciplinary team of surgeons at Texas Children's Hospital prepared in every way possible for the complex procedure.

A medical ethicist was consulted, a simulation of the marathon surgery was held, and a burgeoning new technology was used to create a 3-D model of the twins' anatomy, which was connected from the chest to the pelvis.

With help from MedCad, a Dallas-based printing company, Texas Children's Chief of Radiology Research Rajesh Krishnamurthy, MD, created the model using a computerized image data set of the twins and a 3-D printer. The detailed model included a detachable, transparent liver and was especially helpful in planning the pelvic portion of the surgery, which was challenging because the blood supply for each of the girls' pelvic organs was shared. The twins also shared a pericardial sac, liver, intestinal tract and diaphragm.

"Three-dimensional modeling is a visual representation of the complexity that surgeons might encounter during a procedure," Krishnamurthy said. "It's a very powerful tool when you are trying to develop unique solutions to challenging situations, such as the Matas'."

Texas Children's Hospital has been using 3-D printing since early 2011. Equipped with two in-house 3-D printers, the hospital has created a total of approximately 200 models over the past four years, averaging 50 models a year. While the majority of the models have been used to prepare surgeons for complex procedures, such as the separation of the Mata twins, some models have been used intra-operatively to guide an actual surgery.

One such case involved orthopedic surgeon Scott Rosenfeld, MD, and a 10-year-old female patient with severe left acetabular dysplasia and hip instability resulting in spontaneous painful hip dislocations. The patient previously had been treated multiple times with closed reductions of the hips and spica casting, however her dislocations recurred within months of the cast removal each time.



To get a better look at her skeletal anatomy and to try and figure out exactly what was going on with the patient, Rosenfeld worked with Krishnamurthy to create a life-size 3-D model of the girl's pelvis and femurs. The model allowed Rosenfeld to better understand where the deficiency in the acetabulum was most prominent so that an appropriate correction could be made.

Additionally, the model revealed that the girl's pelvis had a particularly narrow posterior acetabular column, a part of the pelvis that would need to be cut during the surgery. If the cut was made incorrectly it could result in damage to

the hip joint cartilage. Rosenfeld used this information and the 3-D model to simulate the surgery and to help him guide the actual procedure.

Learn more about the Mata twins' historic surgery and road to recovery. journal.texaschildrens.org/issue3

"The 3-D model was used as a template that could be freely examined, manipulated and cut," Rosenfeld said. "Its intricate details ensured that experience with the model hip would translate to the patient's hip. It also created a unique and patient-specific simulation of the operative experience."

A year after the surgery, Rosenfeld's patient walks normally with a stable hip and has no pain. This demonstrates how the use of 3-D models in orthopedic surgery has the potential to improve surgical precision and decrease risk of complications.

Another benefit of 3-D printed models is for the people sitting on the other side of the doctor's desk.

"It's great for teaching the [patient's] parents," Krishnamurthy said. "We've had parents come in and say, 'This is the first time I've really understood what they're planning to do to my child.'"

Krishnamurthy said he expects the use of 3-D printing models to continue to grow and change the way surgeons approach pre- and intra-operative care. He also said Texas Children's will continue to be on the forefront of this in-demand practice, which inevitably will have a growing impact on patient care.



SCHAAF'S DISCOVERY OF RARE DISEASE OPENS DOORS FOR NOVEL TREATMENT APPROACHES

Imagine sorting through 3 billion nucleotides and an estimated 20,000 to 25,000 genes in the human genome to find one mutation or combination of mutations responsible for rare, unnamed neurological disorders.

That's exactly what Christian Schaaf, MD, does as a medical geneticist and researcher at the Jan and Dan Duncan Neurological Research Institute (NRI) at Texas Children's and Baylor College of Medicine. The ability to piece together genetic evidence to solve complex medical mysteries quickly fueled his interest in human genetics as a medical student in Germany.

"It was fascinating to see how single letter changes – 1 in 6 billion letters – can pinpoint the cause of disease," said Schaaf, an assistant professor of Human and Molecular Genetics at Baylor. "Being able to combine my clinical, teaching and research skills to help families obtain a diagnosis for their children's previously unknown conditions is extremely rewarding."

In April 2015, Schaaf and his colleague, Yaping Yang, MD, associate professor of Molecular and Human Genetics at Baylor, learned that a new genetic disease they had discovered would bear their names – Schaaf-Yang syndrome – which is now included in the Online Mendelian Inheritance in Man, a continually updated database of human genes and genetic disorders.

The discovery of Schaaf-Yang syndrome began with a single patient who had been referred to Schaaf by a colleague and whose parents sought answers for years to their son's physical and cognitive problems. Schaaf's 13-year-old patient exhibited many clinical characteristics of a classic genetic disorder called Prader-Willi syndrome. Patients with this syndrome have cognitive problems and early feeding problems superseded by an insatiable appetite and obesity that begins later in childhood.

Whole genome sequencing on that patient identified a single letter change or point mutation in the gene *MAGEL2*. Schaaf was surprised by this finding, as *MAGEL2* is one of the genes associated with Prader-Willi syndrome, a condition that had been suspected in his patient for many years. Instead of missing a whole chunk of chromosomal material – which is the most common cause of Prader-Willi syndrome – his patient had a single letter misspelling in the *MAGEL2* gene.



As Schaaf and Yang found more children with *MAGEL2* mutations – 40 patients have been identified so far with Schaaf-Yang syndrome in the U.S. and Europe – they began to understand the spectrum of problems associated with this disease and subsequently published their groundbreaking findings in the journal *Nature Genetics* in 2013.

“We found that people affected with this disorder look as though they have Prader-Willi syndrome in the first year of life,” Schaaf said. “But as they get older, they distinguish themselves from classic Prader-Willi syndrome. Most patients with this disease do not overeat or become

morbidly obese, but they are more prone to developing autism spectrum disorder.”

While patients with Prader-Willi and Schaaf-Yang syndromes carry a defective *MAGEL2* gene, Schaaf and his Baylor colleague, Michael Fountain, MD, in collaboration with other institutions, discovered that disruptions in the *USP7* gene – which interacts closely with *MAGEL2* – was responsible for a similar neurodevelopmental disorder.

In their groundbreaking study published in the journal *Molecular Cell* in September 2015, they found that a trio of genes – *MAGEL2*, *TRIM27* and *USP7* – regulate the recycling of proteins within cells, which is necessary to maintain normal brain function. When this process is disrupted, it creates a protein imbalance in the cells leading to neurodevelopmental problems.

“Losing the function of *MAGEL2* causes Schaaf-Yang syndrome and losing the function of *USP7* causes a disease that looks very similar, molecularly and clinically,” Schaaf said. “As we continue to examine the molecular pathway of *MAGEL2* and *USP7*, there are many more genes in that signaling cascade, including several that may be good candidate genes for related disorders.”

Building on their findings, Schaaf and his NRI colleagues have launched additional studies that will investigate the physical, behavioral and hormonal phenotypes of Schaaf-Yang syndrome, as well as examine the skin biopsies collected from patients with *MAGEL2* and *USP7* mutations. Using technology of induced pluripotent stem cells, Schaaf says these cells can be reprogrammed to become neurons, enabling researchers to examine the molecular consequences first hand on a cellular level.

“It’s an exciting time in the field of genetics, genomics, and neuroscience research,” Schaaf said. “Today’s technology allows us to answer questions that 10 years ago would have remained completely enigmatic. I am hopeful that our research will one day pave the way for the development of novel treatments for Schaaf-Yang syndrome and related disorders.”



SURGEONS, RICE STUDENTS DEVELOP INNOVATIVE DEVICE FOR URETERAL STENT REMOVAL

What happens when Texas Children's surgeons and Rice University engineering students collaborate to develop innovative solutions to reduce the pain of stent removal after a urinary tract procedure? An award-winning device that could potentially revolutionize the field of pediatric urologic surgery.

Last fall, Chester Koh, MD, a pediatric urologist and surgeon at Texas Children's and Baylor College of Medicine, challenged a group of Rice students to come up with an innovative tool to simplify ureteral stent removals, a fairly common procedure that is performed on more than 2,000 pediatric patients nationwide each year.

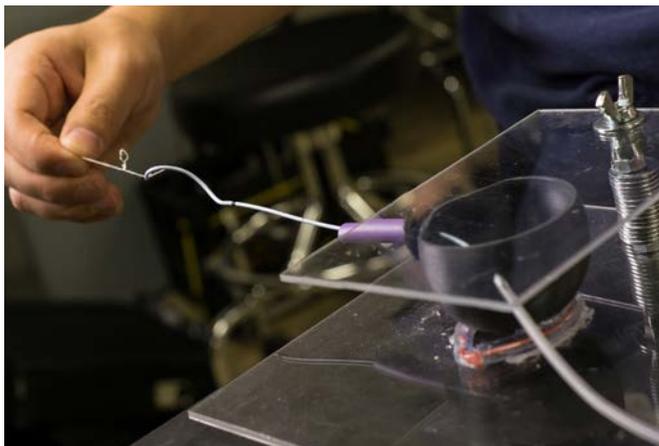
When a stent is inserted into a patient's ureter to improve urine flow from the kidneys to the bladder, the stent is removed after four weeks of healing. The current procedure involves inserting an endoscope into the urethra and bladder to locate and remove the stent, requiring children to be placed under anesthesia.

After collaborating with Texas Children's surgeons to understand the challenges of the current procedure and the need for refinement, the Rice team developed a simple, less invasive device to remove ureteral stents using a small magnetic bead and a powerful custom-built electromagnet the team designed and 3-D printed at Rice's Oshman Engineering Design Kitchen.

The tiny metallic bead can pass safely through the urethra as the magnet pulls the bead out of the body followed by the stent that the bead is attached to.

This new innovation in ureteral stent removal in children is less painful and costs two-thirds less than the standard procedure because it does not require anesthesia, and it can be completed in minutes rather than hours. The team's device won top prize at Rice's annual Engineering Design Showcase and the grand prize for student design at the annual Design of Medical Devices Conference in Minneapolis.

"We are optimistic that this innovation will transform the field of pediatric urologic surgery," said Rice bioengineering student Eric Yin, who is considering applying his engineering expertise to a career in pediatric medicine. "A lot of devices are designed for adults, and Dr. Koh is one of the movers trying to develop more devices that are designed for children."



Koh says the Rice team's new device, and others designed in partnership with Texas Children's surgeons, addresses the severe shortage of medical devices designed for infants and children.

"The development of pediatric medical devices lag behind that of adult devices by more than 10 years," said Koh, who has a mechanical engineering degree from the University of California, Berkeley. "This is an important example of why

academic partnerships are needed to advance pediatric medical device projects, since the pediatric medical device pipeline is currently limited. I applaud the Rice team for showing its dedication and passion to the kids in our care at Texas Children's."

Prior to coming to Texas Children's to establish the robotic surgery program in 2013, Koh co-founded a U.S. Food and Drug Administration-supported pediatric device consortium based in Southern California. He is creating a similar initiative at Texas Children's, drawing on the top engineering talent in the region.

Koh says while not all device projects make it to the clinics or operating room, the path to a finished device often involves many twists and turns. When a need is identified, the surgeon is paired with a student engineering team that carefully observes how the proposed device would be used in the operating room and patient clinics. Brainstorming and idea generation follow, leading to potential designs and solutions, and then building, tweaking and testing the prototype.

Currently, three engineering teams from Rice University and six teams from Texas A&M University are collaborating with Texas Children's surgeons to develop new pediatric medical devices with support from the Texas Children's Auxiliary Denton Cooley Innovation Award. Koh plans to collaborate with other institutions in the future.



PAIN MEDICINE CLINIC OFFERS HOPE TO CHILDREN SUFFERING FROM ACUTE, CHRONIC PAIN

For most of Kaitlyn Ennis' 12-year life she has been in physical pain due to pancreatitis, a disease doctors diagnosed her with when she was just 18 months old.

In the beginning, the condition and the pain were acute, coming and going in spurts. Then it became more frequent, and Kaitlyn began enduring chronic pain almost daily, causing her to miss school and spend more time than she would have liked in the hospital.

"It makes me irritable," Kaitlyn said of the pain she feels when her pancreas becomes inflamed. "I just want it to go away." In January 2015, Texas Children's Hospital launched an interdisciplinary pain medicine clinic to treat patients like Kaitlyn who suffer from chronic pain, a condition that affects 20 percent to 30 percent of children worldwide. The clinic is part of the Pain Medicine Division of the Department of Pediatric Anesthesiology at Baylor College of Medicine and is one of the only clinics of its kind in the Greater Houston area.

"By the time patients arrive to the pain clinic, they often have seen multiple physicians and specialists and are frustrated with feeling neglected by the health care system or are feeling a sense of diagnostic ambiguity, as there is often not a clear

anatomical explanation for chronic pain,” said Grace Kao, a pediatric pain psychologist with the pain clinic and assistant professor at Baylor. “Meeting families where they are and offering hope and support comprises a substantial part of our role as a pain clinic team.”

In a patient’s initial intake evaluation, members of the pain clinic team provide a thorough pain history assessment, psychosocial interviews and thorough physical exams by pain physicians and physical therapists. All of this information is used to help develop a comprehensive treatment plan, which is shared with the family in a joint feedback session at the end of the appointment.



Knowing pain can affect so many parts of life, the pain clinic team typically provides recommendations in multiple arenas: medication management, medical procedures, lifestyle changes, physical and occupational therapy, school accommodation and pain psychology.

“The interdisciplinary clinic model provides the valuable benefit of combining multiple services within the same appointment and creates the opportunity for clinicians to inform each other’s recommendations on the spot,” Kao said. “Patients often return for follow up with multiple team providers to target different parts of their pain picture.”

When Kaitlyn and her family first came to the pain clinic, they were looking for a way to manage the girl’s chronic pain without admitting her into the hospital.

“We wanted to be able to manage her pain at home,” said Kaitlyn’s mother, Sara Ennis. “Admitting her into the hospital every month or so was not working.”

After examining Kaitlyn, the team at the pain clinic put her on a medication regime and armed her with tools in pain psychology, including guided imagery. Soon thereafter, Kaitlyn and her family were managing her episodes of acute pain in the comfort of their home instead of taking her to the hospital. Kaitlyn’s chronic pain was nearly gone.

“The treatment they provided was life changing,” Sara Ennis said. “I am so impressed with the team; nothing is trivial to them, and as a result, they made life easier for a lot of us.”

Caro Monico, MD, a member of the pain medicine clinic team and an assistant professor of pain management at Baylor College of Medicine, said the foundation of the clinic’s treatment is to reintegrate children into school, physical activity and normal life.

“Simply put, we want our patients to feel normal,” she said. “And for many, we can accomplish that goal.”



CEO TAKES TOWN HALL TO ANOTHER LEVEL

Before coming to Texas Children's, many employees from organizations of thousands have rarely seen their previous CEOs. But Texas Children's President and CEO Mark Wallace has always made accessibility a priority. In fact, most new employees meet him within the first three months at quarterly New Employee Receptions.

Wallace believes that being approachable and accessible sparks conversation and invites innovative ideas for improving patient care and operating efficiently. He often walks the hospital, greeting and talking with employees and has a knack for recalling their names and life events. So it was no surprise when Wallace approached the hospital's Marketing/PR team with an idea.

"I said, 'Guys, let's do something big,'" Wallace recalled. "I wanted to try to reach every Texas Children's employee and show them how much they are appreciated. I wanted to celebrate who we are, all the amazing things we do together every day and everything that makes our organization's culture so special."

Wallace was not talking about a run-of-the-mill town hall meeting. He and his team were thinking bigger and much more creatively. Together, they came up with the One Mission, One Culture, One Amazing Team events, which kicked off at the be-

gining of summer 2015 and were open to all employees and staff. More than 4,000 of them attended the event's seven sessions at the Texas Children's Hospital medical center campus, Texas Children's Hospital West Campus and at the hospital's John P. McGovern Building. The events were come-and-go, celebratory sessions that featured Texas Children's core values in a fun, festive atmosphere with snacks, drinks, music, and fun activities/giveaways in zones themed for the hospital's core values.

After completing the hospital-based events, Wallace took the celebration on the road, traveling with a core team of executives, including Marketing/PR Senior Vice President Amber

During the visits to each location, Wallace expressed his gratitude for the teams' work and contributions to fulfilling the mission at their respective facilities and in their surrounding communities. He also shared information about Texas Children's tremendous physical, programmatic and workforce growth and his vision for the organization's immediate and long-term future. He hosted informal, "open forum" style lunches with team members at some of the locations when possible, and to many team members' delight, he also posed for lots of photos and enjoyed all of the festive celebrations staffers organized for his stops. In total, Wallace and his team met nearly 2,000 employees during the One Amazing Team tour.

"It was better than anything I ever dreamed," Wallace said. "It was quite an experience to see firsthand the amazing impact and imprint of Texas Children's. At every stop, I saw the shared pride and commitment of all the physicians and employees. I talked to practice managers about the families they serve, and I learned about ideas they've implemented to extend our reach and broaden access to health care in their communities.

"It's not until you visit our locations all over the city that you can even begin to appreciate how much Texas Children's is doing to change and advance care for children and women. I'm so proud of the people who work here – we are definitely one amazing team."



Tabora and Texas Children's Pediatrics leaders President Kay Tittle, Chief Medical Officer Stanley Spinner, MD, and Vice President Lou Fragoso, as the bulk of sites visited were the pediatrics practices. The group was joined by a number of other executives throughout the tour.

Over the course of three months, Wallace spent 10 days visiting staff and employees at all Texas Children's Pediatrics practices and Central Business Office; Texas Children's Maternal Fetal Medicine clinics and Ob/Gyn practice; Texas Children's Health Centers; The Center for Children and Women locations; Texas Children's Urgent Care sites; and the Texas Children's off-site warehouse. In advance of his visits, Wallace's team sent gift bags to each staff member and employee filled with snacks, a copy of *The Magic Book of Maxims* (a children's book featuring Wallace's leadership maxims), items related to the core values and comment cards to complete for a chance to win tickets to a Houston Texans football game.

One Mission, Once Culture, One Amazing Team events and tour

- 7 hospital-based celebrations
- 6,000 staff and employees reached
- 800 miles traveled
- 90 hours on the road
- 73 locations visited, including:
 - 51 Texas Children's Pediatrics practices
 - 7 Texas Children's Specialty Care locations
 - 5 Maternal Fetal Medicine clinics
 - 3 Texas Children's Urgent Care locations
 - 2 Center for Children and Women locations



DEVELOPING TINY DEVICES FOR FETAL SURGERY

Milan Torry doesn't know how lucky she is to be alive, but her parents do. Before she was even born, Milan underwent the first experimental prenatal surgery in the Southwest for a condition called congenital diaphragmatic hernia (CDH) — a hole in the diaphragm that allows the organs to gravitate from the abdomen to the chest.

While Milan was still inside her mother's protective womb at 27 weeks gestation, Texas Children's Fetal Center surgeon Oluyinka Olutoye, MD, and Texas Children's Ob/Gyn-in-chief Michael Belfort, MD, performed an experimental procedure using a Balt balloon to treat CDH. Milan was born at 35 weeks, crying heartily and without serious complications.

Even though Milan required immediate surgery to reposition her organs and close the hernia, her outcome was much better than it would have been without the fetal intervention. Fifty percent of babies with this condition die, and our physicians strongly believe that this number could be much lower with the development of more appropriate surgical instruments.

Balt balloon treatment of congenital diaphragmatic hernia

Texas Children's Fetal Center is the only center in the United States performing an experimental procedure that uses a Balt balloon to treat CDH in babies whose conditions are so severe that they have little chance of survival without intervention.

Funding from the Sterling-Turner Foundation allowed the hospital to purchase and test the Balt balloon for efficacy as a replacement for the previously used Goldvalve balloon, which is no longer in production.

Texas Children's must obtain clearance from the Food and Drug Administration (FDA) for each procedure performed, and so far, the use of the Balt balloon has been approved in most cases. Women from all over the country and from around the world have traveled to Houston for this procedure, which has had groundbreaking results.

Fetoscopic repair of open neural tube defect

On July 30, 2014, Texas Children's Fetal Center's multidisciplinary team completed their first in-utero procedure using a fetoscope to repair an open neural tube defect, a form of spina bifida. Belfort and pediatric neurosurgeon William Whitehead, MD, developed the innovative approach while working in conjunction with Vall d'Hebron University Hospital in Barcelona, Spain.



The surgery features an in-utero, single-layer, sutured repair through two 4-millimeter incisions in the uterus (rather than the 5-6-centimeter uterine incision required for the open procedure that is the standard of care in the United States). Support from The Fondren Foundation, The John M. O'Quinn Foundation and Cindy and Don Poarch helped develop the simulator used in this repair. This new minimally invasive procedure reduces the risks of maternal complications and preterm delivery. Texas Children's Fetal Center have had exceptional outcomes for the babies and their mothers.

Investing in advancement

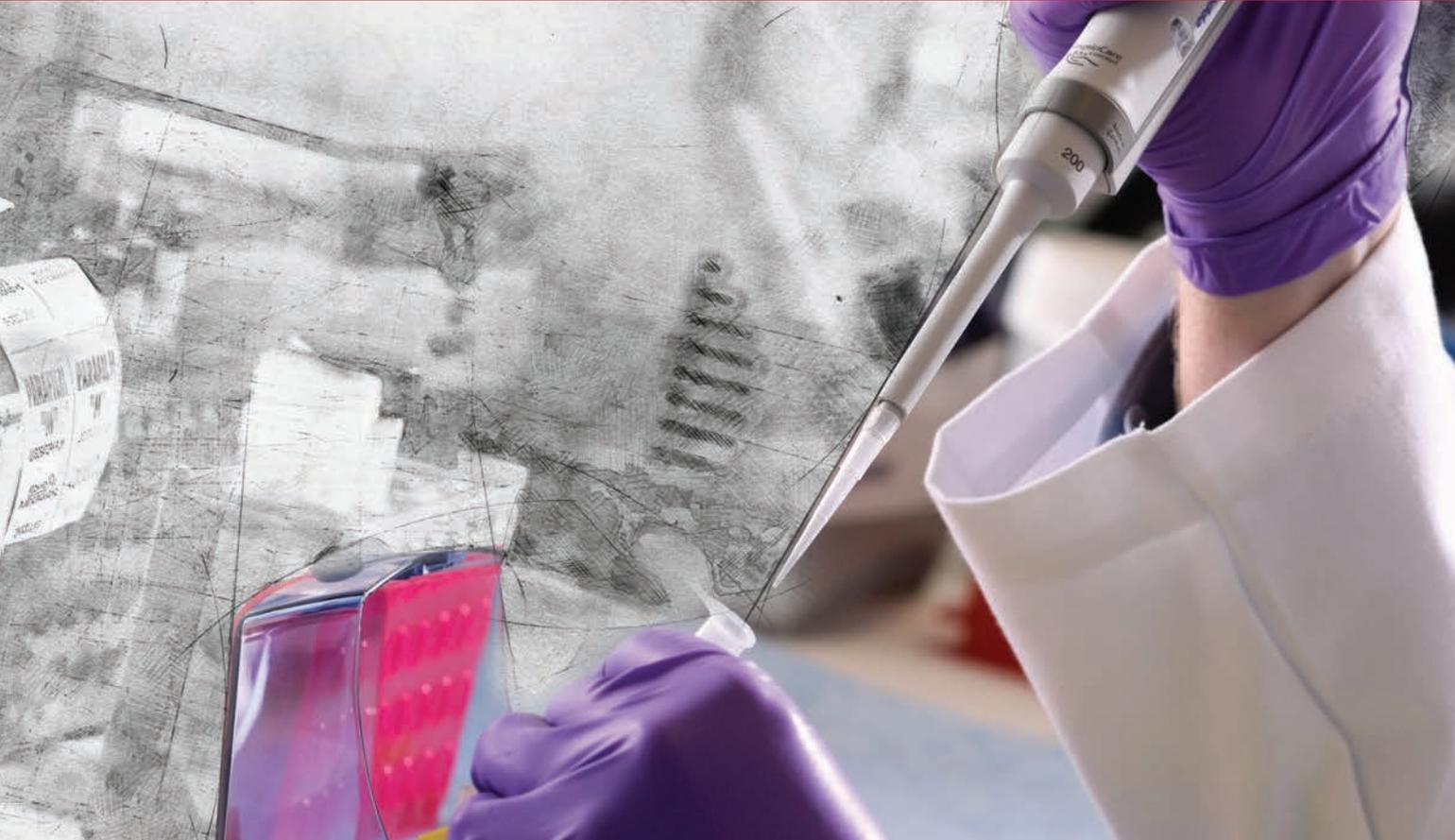
The Sterling-Turner Foundation (\$1,000,000), The Fondren Foundation (\$250,000), The John M. O'Quinn Foundation (\$100,000), and Cindy and Don Poarch (\$100,000) all have contributed to the development of fetal surgery devices at Texas Children's Fetal Center in recent years. Their philanthropy is speeding the creation of new surgical instruments that are transforming fetal surgery and the lives of children even before they are born.

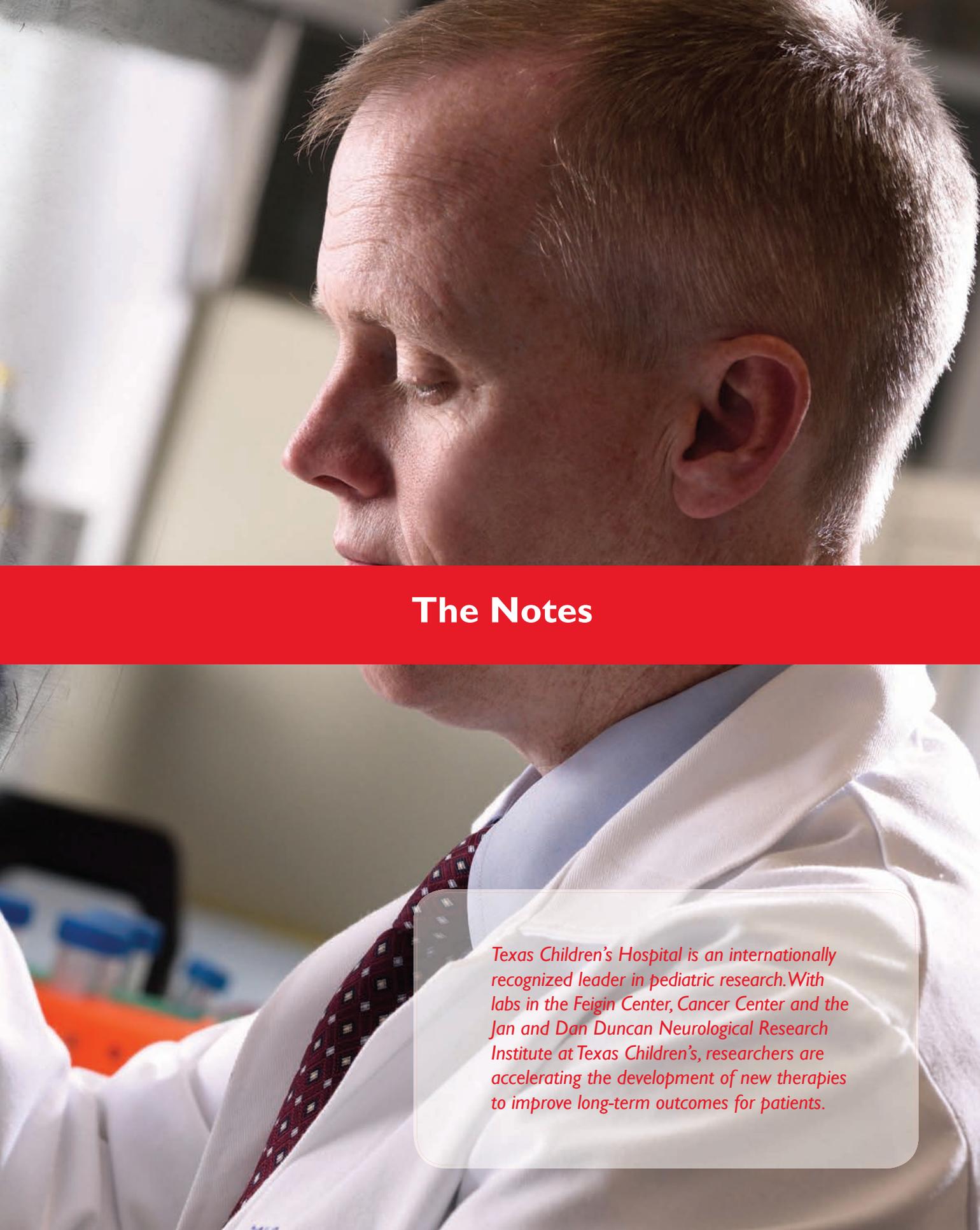
It takes individuals with courage and foresight to support experimental procedures in an already challenging endeavor like operating on babies in-utero. But the aforementioned are visionaries and had complete confidence in the skilled team at Texas Children's Fetal Center. The center is one of only a few in the world to offer the full spectrum of fetal therapies, including maternal-fetal medicine and fetal surgery for craniofacial anomalies; fetal cardiac conditions; lung lesions; neural tube and spinal defects; twin abnormalities; and other conditions of the bladder, brain and kidney.

Texas Children's surgeons, physicians and scientists have pursued the development of appropriately sized devices that will make fetal procedures less invasive and promote faster recovery times for both the babies and their mothers. They have worked diligently to prepare and adapt the standard instruments currently available to fit the needs of their tiny patients, because they know the investment in design compels medical supply and technology companies to invest in development.

The number of fetal surgeries performed, although increasing, still will not yield a significant return according to corporate standards, so Texas Children's surgeons, physicians and scientists are leveraging their own expertise in using existing tools and have partnered with engineers and machinists who are proficient with advanced technology and are helping complete preliminary designs and tangible versions of fetal surgery devices.

Texas Children's Hospital is able to advance its pioneering legacy thanks to generous donors who believe and invest in innovative work like the development of devices specially designed for fetal surgery.





The Notes

Texas Children's Hospital is an internationally recognized leader in pediatric research. With labs in the Feigin Center, Cancer Center and the Jan and Dan Duncan Neurological Research Institute at Texas Children's, researchers are accelerating the development of new therapies to improve long-term outcomes for patients.

TEXAS CHILDREN'S HOSPITAL BUILDS NEW PEDIATRIC CRITICAL CARE TOWER

On January 13, 2015, Texas Children's Board of Trustees approved expansion and renovation plans for the hospital's main campus in the Texas Medical Center. The expansion includes reinvesting in the programs needed by the most critically ill patients, primarily in the critical care units, operating rooms, Heart Center, Emergency Center and many of the hospital's diagnostic and therapeutic services.

Collaborating with design and construction professionals including FKP Architects and WS Bellows Construction Corporation, Texas Children's plan is to build 19 floors to the existing building base next to Texas Children's Pavilion for Women adding 640,000 square feet, resulting in a 25-floor tower.

Slated to be completed in 2018, the new critical care tower will house 130 beds for pediatric and cardiovascular intensive care, new operating rooms with the latest technology and will be the new home to Texas Children's Heart Center, including the outpatient clinic, cardiovascular operating rooms and catheterization labs. The new space will maximize team sub-specialization and coordination in the operating rooms. The new tower will also include a helipad to get critically ill children to the right care and the right time and place. The total project budget for the vertical expansion is \$506 million.

Along with the new critical care tower,

Texas Children's will also renovate the Emergency Center and other areas in the hospital's West Tower. Diagnostic

These facility developments will be partially supported through the hospital's \$475 million Promise campaign, a



Significant progress has been made to Texas Children's new inpatient care tower, which is scheduled to open in 2018. The new tower at Texas Children's medical center campus will increase capacity in critical care and surgical units.

and therapeutic services will also be expanded throughout the main campus so care can be delivered close to the patients.

"These programs are at the core of our mission to create a healthier future for children throughout our broad community and will ensure the best possible outcomes for some of the nation's sickest children," said Mark A. Wallace, president and CEO of Texas Children's Hospital. "The expansion will help us deliver on our promise to make Texas Children's the best possible place to give and receive care."

fundraising effort that will help ensure the future of Texas Children's as a leader in pediatric and women's health. The goal of the campaign is to support critical care services at Texas Children's Hospital's main campus, specifically re-designing and expanding the Emergency Center, critical care and surgical areas. The Promise campaign also includes facility expansion projects within the Texas Children's system, such as Texas Children's Hospital The Woodlands, and other programmatic needs.

Caption: (show recent construction progress on Tower)

TEXAS CHILDREN'S OPENS FIRST-OF-ITS-KIND PEDIATRIC HEART FAILURE ICU

On July 6, 2015, Texas Children's Heart Center and the section of Critical Care Medicine cut the ribbon on a new, first-of-its-kind pediatric heart failure intensive care unit. This highly-specialized 12-bed unit specializes in the treatment of children with heart failure and those requiring intensive care before and after heart transplant.

"We are thrilled to be the first in the nation to offer this highly-specialized level of pediatric critical care," said Paul Checchia, MD, medical director of the cardiovascular intensive care unit at (CVICU) at Texas Children's Hospital. "Patient outcomes will continue to improve as we treat their unique needs in this new setting."

Kerry Sembera, a heart center clinical liaison, and Gail Parazynski, RN, assistant vice president of Critical Care, worked in collaboration with physician leadership to execute a successful intensive care room design and plan for safe transition of patients to this new environment. The CVICU nursing team were enthusiastic champions of the unit leading to a seamless transition.

The heart failure and cardiac transplantation programs at Texas Children's Heart Center are among the largest and most successful programs in the world. More than 650

cardiomyopathy patients are cared for each year by a team of physicians, nurse coordinators and administrative personnel. When a transplant is not immediately available, a variety of circulatory support devices are used as a bridge to transplantation.

Currently, Texas Children's Heart Center offers a wide range of

Heart, Thoratec Paracorporeal VAD (ventricular assist device), Thoratec HeartMate II, Berlin Heart EXCOR, Heartware LVAD and Syncardia Total Artificial Heart.

Checchia and Lara Shekerdeman, MD, section head of Critical Care at Texas Children's, oversee the heart failure intensive care unit. Antonio Cabrera,



Cardiology patient Marcelo Perez cuts the red ribbon officially marking the opening of Texas Children's first-of-its-kind Pediatric Heart Failure ICU.

mechanical circulatory support devices, as well as extracorporeal membrane oxygenation (ECMO), to children whose hearts are failing: Maquet Rotaflow, Cardiac Assist Tandem

MD, and Jack Price, MD, serve as associate medical directors of the unit.

NEW THYROID TUMOR PROGRAM OFFERS STATE-OF-THE-ART PEDIATRIC CARE

Texas Children's Hospital launched a new pediatric Thyroid Tumor Program in June 2015 dedicated to the diagnosis and treatment of children and young adults with thyroid tumors, cancer and diseases.

Approximately 2 percent of children develop solitary thyroid nodules, most of which are benign, but a few are malignant and can develop into thyroid cancer. Although thyroid tumors in children are rare, they are being diagnosed with increased frequency. The Surveillance Epidemiology and

End Results (SEER) program estimates 1,200 children will be diagnosed with thyroid cancer in the U.S. this year.

"Thyroid tumors in children are especially challenging for many children's hospitals, as specialized expertise is often not available and many pediatricians and surgeons have limited experience with them," said Jake Kushner, MD, Texas Children's chief of pediatric diabetes and endocrinology. "Our goal is to ensure that children with thyroid tumors have the highest possible level of care to improve their

quality of life, and ultimately, to increase the odds of survivorship."

Texas Children's Thyroid Tumor Program combines the expertise and skills of a dedicated team of pediatric specialists in surgery, endocrinology, pathology, radiology, nuclear medicine, oncology, psychology and nursing to give every child with a thyroid tumor state-of-the-art care.

Led by Texas Children's pediatric endocrinologist Ioanna Athanassaki, MD, and Texas Children's pediatric surgeon Monica Lopez, MD, the Thyroid Tumor Program strives to provide best-in-class care and will remain dedicated to tracking patient outcomes to refine and improve management of patients with these diseases.



Led by Dr. Ioanna Athanassaki, Texas Children's Thyroid Tumor Program offers state-of-the art, multidisciplinary care to enhance outcomes for patients with thyroid tumors.

TEXAS CHILDREN'S PEDIATRICS CELEBRATES 20 YEARS OF PROVIDING PRIMARY CARE

Texas Children's Pediatrics celebrated a notable milestone on August 1, 2015. Twenty years ago on that day, Texas Children's launched what is now the largest pediatric network in the nation with more than 200 board-certified pediatricians and 51 practices throughout the greater Houston area. Each year, the group sees 400,000 patients and completes more than one million visits.

In addition to providing its physicians with administrative, financial and management expertise, Texas Children's Pediatrics offers a link to the entire Texas Children's system, which includes more than 2,000 medical staff that provide care in more than 40 pediatric subspecialties.

"Texas Children's Pediatrics is part of the Texas Children's family," said Kay Tittle, president of Texas Children's Pediatrics. "The organizations support each other and allow everyone to focus on our top priority, which is taking care of patients and their families in their communities."

TEXAS CHILDREN'S URGENT CARE NETWORK EXPANDS TO THE WOODLANDS

Texas Children's expanded its urgent care network with the addition of Texas Children's Urgent Care Clinic in The Woodlands that opened in August 2015.

The new facility is the third urgent care center to open following the 2014 opening of Texas Children's Urgent Care in the Cinco Ranch and Memorial areas. These locations have already

served more than 20,000 children and adults up to age 18.

"Our urgent care centers were created to respond to the growing need for expert pediatric urgent care," said Texas Children's Pediatrics Vice President Lou Fragoso. "The result is a clinical system that provides outstanding customer service through high-quality, efficient

and affordable care – right in our patients' neighborhoods."

Open weekday evenings and weekends, the centers are staffed by board-certified pediatricians and are equipped to diagnose and treat common pediatric illnesses and injuries. If a patient's illness or injury requires a higher level of care, the urgent care staff is able to stabilize and transfer that patient to an appropriate pediatric hospital.

"Our efficient processes allow us to register, diagnose, treat and discharge a child in less than one hour for a majority of patients," Fragoso said. "By the time a child is discharged, their prescription will have been sent to the pharmacy and a summary of the visit sent to their pediatrician."

In 2016, Texas Children's grew its urgent care network with three more locations in the Houston area – one at Texas Children's medical center campus, Pearland and The Vintage – bringing the total to six Texas Children's Urgent Care facilities with more facilities planned in the future.



Texas Children's expanded its urgent care network in 2015, adding a location in The Woodlands, to better serve our patients and their families in their communities.

TREE TOPPING CEREMONY MARKS HALF-WAY MILESTONE FOR THE WOODLANDS CAMPUS

On August 14, 2015, a 7-foot-tall Mexican White Oak tree was hoisted to the top of what will soon be Texas Children's Hospital The Woodlands. The tree hoisting event marked the half-way point in the construction of Texas Children's second community hospital which will open its doors in 2017.

Adorned with promises made by Texas Children's employees to The Woodlands community, the tree was placed atop the unfinished hospital for a week before being planted on facility grounds. Texas Children's President and CEO Mark A. Wallace, along with a group of former Texas Children's Hospital patients and hundreds of supporters, attended this milestone celebration.

"All of you who are here today are here because you share our commitment, our promise, to provide the very best care when and where our families need it most," Wallace said. "That is why we are topping out The Woodlands campus with this very special tree."

Texas Children's Hospital The Woodlands President Michelle Riley-Brown and Chief Medical Officer Dr. Charles Hankins shared their excitement about the plans for the hospital and The Woodlands community.

"At Texas Children's, we are not only committed to meeting the needs of patients and families we serve, but we are committed to doing that in a way



that works for them," Riley-Brown said. "For so many, this means providing care close to home. That's exactly why we are building Texas Children's Hospital The Woodlands."

The hospital will serve children and families in the Woodlands, Kingwood, Conroe, Spring, Magnolia, Humble, Huntsville and beyond, and will build on a decade's worth of relationships Texas Children's has built in the community through our primary and sub-specialty care at Texas Children's Pediatrics locations and the Texas Children's Health Center The Woodlands.



Texas Children's Hospital The Woodlands is scheduled to open in 2017. In August 2015, a tree topping ceremony (right) was held to mark the half-way point in the construction of Texas Children's second community hospital.

TEXAS CHILDREN'S RECEIVES GRANT TO OPTIMIZE CARE FOR CHILDREN WITH SPINA BIFIDA

In FY 2015, Texas Children's and Baylor College of Medicine received a grant from the U.S. Centers for Disease Control and Prevention (CDC) to develop national standards in spina bifida care for pediatric patients. The \$400,000 five-year grant was awarded through the National Center on Birth Defects and Developmental Disabilities and Division of Human Development and Disability.

Texas Children's and Baylor are the first Texas institutions to participate in the CDC's National Spina Bifida Patient Registry, which collects data to evaluate existing medical care for spina bifida patients. More than 70,000 people in the United States have this birth defect. The grant is designed to collect longitudinal data on children to

determine best practices by comparing differences in interventions and outcomes among participating clinics nationwide.

Jonathan Castillo MD, developmental pediatrician at Texas Children's and assistant professor of pediatrics at Baylor, and Heidi Castillo, MD, assistant professor of Developmental-Behavioral Pediatrics at Baylor and Texas Children's, will focus on data collection and analysis. Chester Koh, MD, director of Texas Children's Pediatric Robotic Surgery Program and associate professor of urology at Baylor, and Patricio Gargollo, MD, director of Texas Children's Complex Urogenital Reconstruction Program and associate professor of urology at Baylor, will lead the urologic component of this grant.

Along with William Whitehead, MD, pediatric neurosurgeon at Texas Children's and assistant professor of neurosurgery at Baylor, these surgeons will implement a urologic management protocol to preserve renal function in newborns and young children with spina bifida including children who have undergone fetal surgery.

"This strong partnership between the departments of Pediatrics and Surgery at Texas Children's is filling a large gap in the state by being the only hospital to join the CDC's National Spina Bifida Patient Registry," Koh said. "We will be a major referral site for patients from prenatal diagnosis and intervention to postnatal care."

TEXAS CHILDREN'S DETERMINES STANDARD OF CARE FOR CHILDREN WITH CLEFT LIP AND PALATE

On April 9, 2015, Texas Children's Hospital joined an international group of medical professionals, patients and parents to determine a standard set of outcome measures for children born with cleft lip and palate. This work is the first of its kind in pediatrics on an international stage and these guidelines will help all institutions develop a standard treatment of care for this population of patients.

Three representatives from Texas Children's Hospital participated in the esteemed program, including Laura Monson, MD, pediatric plastic surgeon at Texas Children's and assistant professor of surgery at Baylor College of Medicine, outcomes research nurse Christy Hernandez, RN, from Texas Children's Hospital Outcomes

Impact Service, and Texas Children's craniofacial orthodontist and Baylor assistant professor of plastic surgery John Wirthlin, MD. The working group was also comprised of members from Australia, Canada, India, Netherlands, Spain, Sweden, the UK and the United States.

The team, which was formed by The International Consortium for Health Outcomes Measurement (ICHOM), evaluated the burden of treatment and complications, including the number of interventions, major surgical complications and readmissions. It also took into account the health of the patient, looking at factors like speech, oral health, eating and drinking, appearance, body weight and psychosocial functioning.

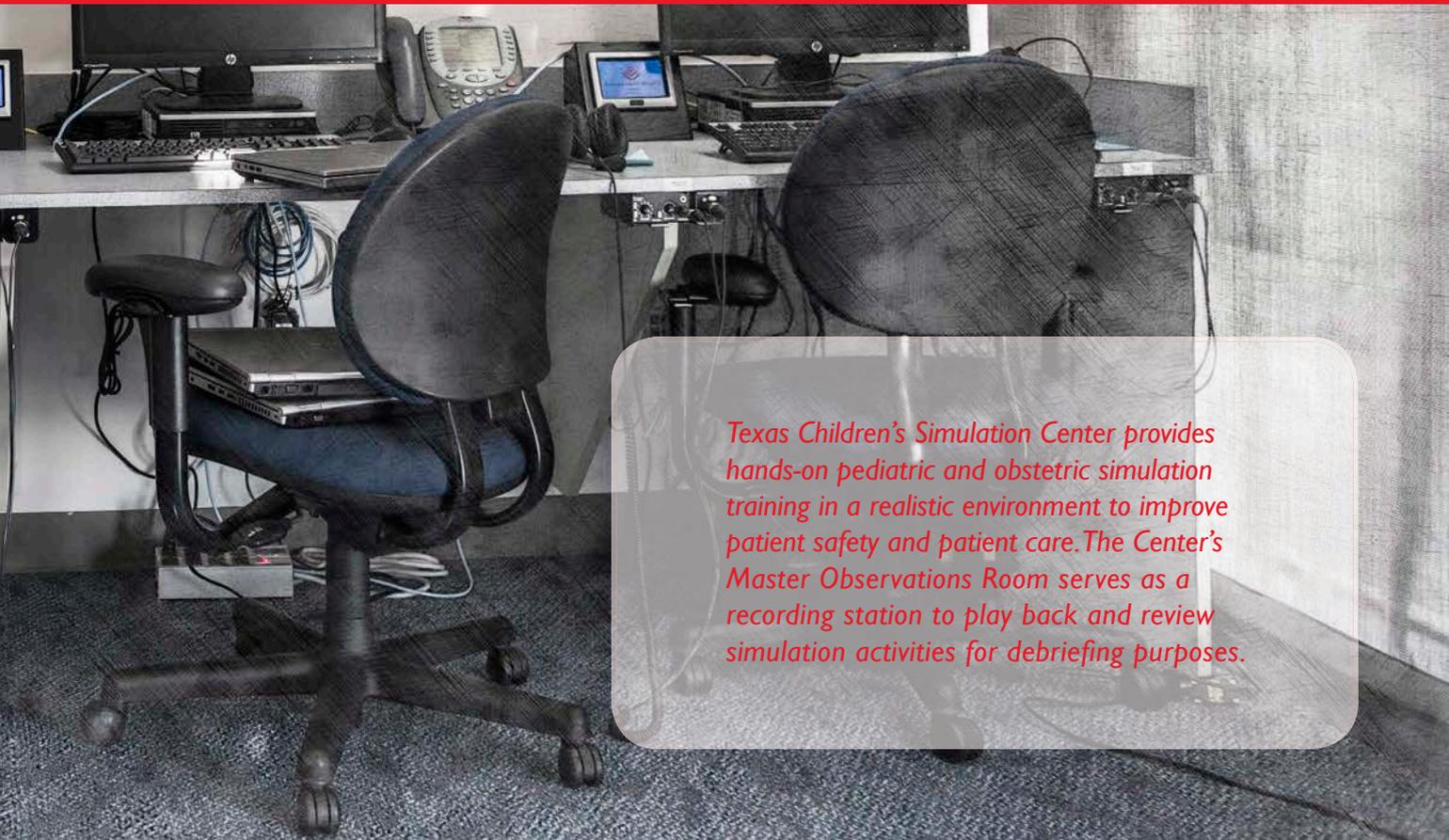
Texas Children's treats a large majority of cleft lip and palate patients resulting in nearly 2,000 clinic visits and 500 surgical cases per year. The clinic's multidisciplinary team follows patients' clinical outcomes and quality of life for 18 years, tracking the patient's speech progress, the aesthetical development of the cleft lip and palate repair, and the progress of the child's emotional and psychosocial healing.

"We are committed to tracking the progress of our kids so we can perfect the already exceptional care we provide and improve clinical outcomes for those future families that will be seeking our help down the road," Wirthlin said. "Helping to create these guidelines was just one more step in bettering our patients' lives."





The Numbers



Texas Children's Simulation Center provides hands-on pediatric and obstetric simulation training in a realistic environment to improve patient safety and patient care. The Center's Master Observations Room serves as a recording station to play back and review simulation activities for debriefing purposes.

STATEMENT OF OPERATIONS*

October 1, 2014 to September 30, 2015

in thousands

Net patient service revenue	\$1,706,801
Medicaid insurance plan premium revenue.....	964,673
Supplemental Medicaid funding.....	78,760
Other operating revenue	93,480
Total operating revenue	2,843,714
Less operating expenses.....	2,723,504
Available for reinvestment in the mission.....	\$120,210

PATIENT STATISTICS

Admissions.....31,651

Texas Children’s Hospital Main Campus.....	17,961
Texas Children’s Hospital West Campus.....	1,990
Texas Children’s Pavilion for Women.....	11,700

Census days214,391

Texas Children’s Hospital Main Campus.....	156,067
Texas Children’s Hospital West Campus.....	11,007
Texas Children’s Pavilion for Women.....	47,317

Inpatient/outpatient surgeries..... 28,883

Texas Children’s Hospital Main Campus.....	21,446
Texas Children’s Hospital West Campus.....	5,357
Texas Children’s Pavilion for Women.....	2,080

Emergency Center visits 121,976

Texas Children’s Hospital Main Campus.....	77,715
Texas Children’s Hospital West Campus.....	44,261

Total patient encounters3,482,664

Texas Children’s Hospital Main Campus.....	40%
Texas Children’s Hospital West Campus.....	9%
Texas Children’s Pavilion for Women.....	6%
Texas Children’s Pediatrics	36%
Texas Children’s Health Centers	7%
The Center for Children and Women.....	2%

Texas Children’s Health Plan members 394,567

Medicaid.....	334,754
Children’s Health Insurance Plan (CHIP).....	59,813

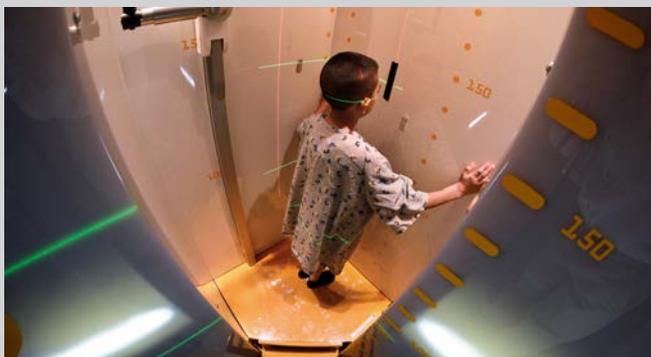
COMMUNITY INVESTMENT

Calendar Year 2014

in millions

The programs described in this report reflect the community benefit provided by Texas Children’s Hospital in calendar year 2014. Totaling more than \$155 million, the specific areas of support include:

Financial assistance and means-tested government programs	\$82.4
Community health improvement	\$3.5
Health professional education	\$28.6
Subsidized health care services	\$4.8
Research	\$55.6
Cash and in-kind contributions.....	\$3.2



BAYLOR COLLEGE OF MEDICINE

Texas Children’s Hospital is proud of its affiliation with academic partner Baylor College of Medicine, home to one of the largest, most diverse and successful pediatric programs in the nation. Baylor’s pediatrics program ranked no. 8 among all pediatrics programs on the *U.S. News & World Report* list of America’s Best Graduate Schools and no. 18 among all research-intensive U.S. medical schools. Below are current statistics for Baylor.

Faculty	1,179
Residents	396
Clinical and postdoctoral fellows.....	122
 Research support (in millions)	
Pediatrics, Pediatric Surgery and Ob/Gyn annual research funding	\$103.5*

*Includes the Department of Pediatrics’ National Institutes of Health funding of approximately \$89.2M

ADMINISTRATIVE AND MEDICAL EXECUTIVE LEADERSHIP

ADMINISTRATIVE

Mark A. Wallace, President and CEO

Linda W. Aldred, Senior Vice President

Paola Alvarez-Malo, Assistant Vice President

Mary Jo Andre, Senior Vice President/Chief Nursing Officer

H. Mallory Caldwell, Senior Vice President

Catherine R. Codispoti, Vice President

Cris C. Daskevich, Senior Vice President

Myra L. Davis, Senior Vice President/
Chief Information Officer

Peter R. Dawson, Senior Vice President

Dan R. DiPrisco, Senior Vice President,
Texas Children's Hospital The Woodlands

Robert W. Durden, Senior Vice President/
Chief Investment Officer

Lou A. Fragoso, Vice President, Texas Children's Pediatrics

Weldon W. Gage, Executive Vice President/
Chief Financial Officer

Angelo P. Giardino, MD, PhD, Senior Vice President

Matthew T. Giroto, Vice President

Bert M. Gumeringer, Assistant Vice President

John K. Henderson, Assistant Vice President

Bill Hilton, Senior Vice President, Revenue Cycle

Trudy A. Leidich, Assistant Vice President

Lance A. Lightfoot, Vice President/General Counsel

Anna E. Mateja, Vice President/
Chief Financial Officer, Texas Children's Health Plan

Sarah F. Maytum, Assistant Vice President

Benjamin B. Melson, Executive Vice President

Sarah F. Montenegro, Assistant Vice President
Texas Children's Hospital West Campus

Mark Mullarkey, Executive Vice President

John R. Nickens, Executive Vice President

Gail Parazynski, Assistant Vice President

Jill S. Pearsall, Assistant Vice President

Matt Perkins, Assistant Vice President

Tabitha L. Rice, Senior Vice President



Michelle Riley-Brown, Executive Vice President,
President, Texas Children's Hospital The Woodlands

Diane Scardino, Vice President

Matt C. Schaefer, President,
Texas Children's Hospital West Campus

Ivett T. Shah, Assistant Vice President

Rachel M. Shupe, Vice President

Stanley W. Spinner, MD, Vice President

Judy Swanson, Vice President

Amber L. Tabora, Senior Vice President,
Chief Marketing & PR Officer, Chief Development Officer

Tangula Taylor, Assistant Vice President,
Texas Children's Health Plan

Kay O. Tittle, President, Texas Children's Pediatrics

Janet Treadwell, Assistant Vice President,
Texas Children's Health Plan

Lynda Tyer-Viola, Assistant Vice President

Sherry Vetter, Assistant Vice President,
Texas Children's Health Plan

Jacqueline R. Ward, Vice President

ADMINISTRATIVE AND MEDICAL EXECUTIVE LEADERSHIP

MEDICAL

Michael A. Belfort, MD PhD
Ob/Gyn-in-Chief

Charles D. Fraser Jr., MD
Surgeon-in-Chief

Mark W. Kline, MD
Physician-in-Chief

Dean B. Andropoulos, MD
Anesthesiologist-in-Chief

George S. Bisset III, MD
Radiologist-in-Chief

Gary A. Dildy III, MD
Chief Quality Officer – Ob/Gyn

William J. Dreyer, MD
2015 President, Texas Children's Medical Staff

Lane F. Donnelly, MD
Chief Quality Officer – Hospital-Based Services

Angelo Giardino, MD, PhD
Chief Quality Officer

Jeanine M. Graf, MD
2016 President – Medical Staff
Chief Medical Officer – Texas Children's Hospital West Campus

Charles Hankins, MD
Chief Medical Officer, Texas Children's Hospital The Woodlands

Lisa M. Hollier, MD
Chief Medical Officer – OB/GYN, Texas Children's Health Plan

Thomas Luerksen, MD
Chief Quality Officer – Surgery

Allen Millewicz, MD
Chief Surgical Officer, Texas Children's Hospital West Campus

Heidi Schwarzwald, MD
Chief Medical Officer – Pediatrics, Texas Children's Health Plan

Joan E. Shook, MD
Chief Safety Officer and Deputy Chief Quality Officer

Stanley Spinner, MD
Chief Medical Officer, Texas Children's Pediatrics

James Versalovic, MD, PhD
Pathologist-in-Chief

David Wesson, MD
Associate Surgeon-in-Chief

Eric A. Williams, MD
Chief Medical Information Officer

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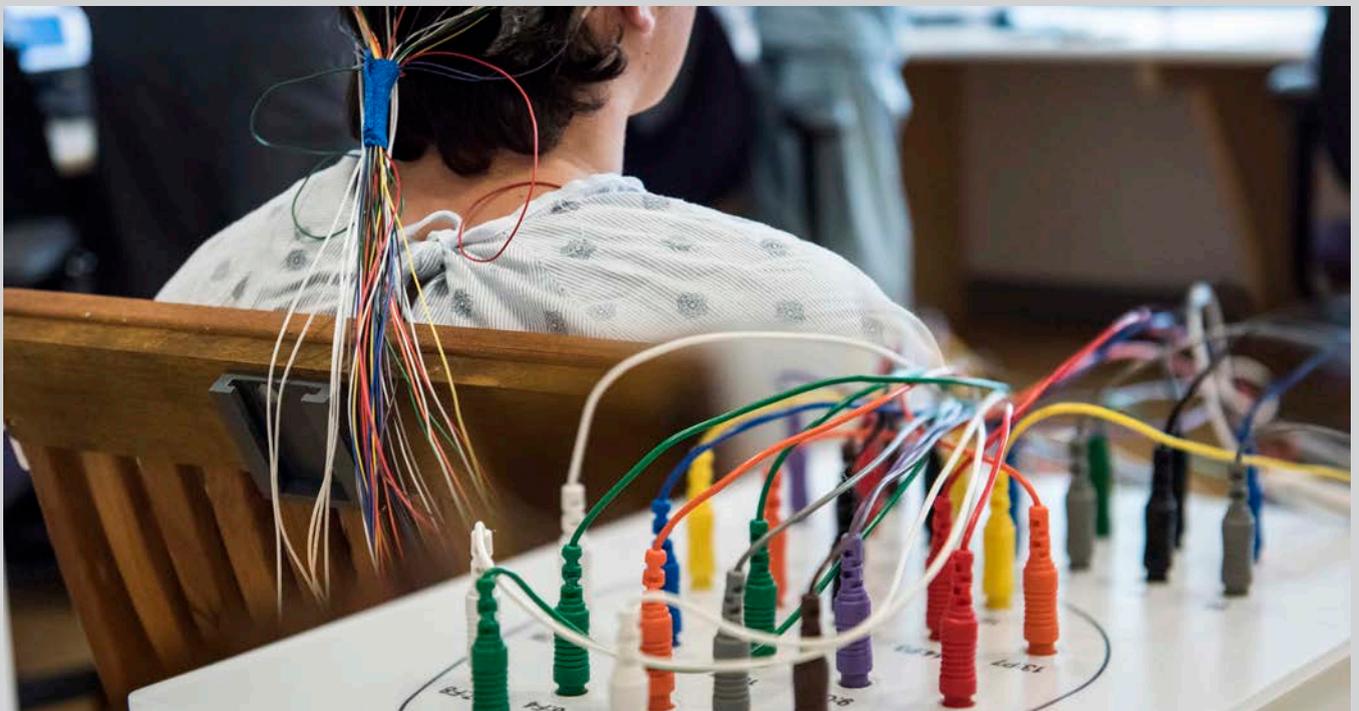
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P R O M I S E

The Campaign for
Texas Children's Hospital

To give Juliana a new heart and a brighter beginning.

Juliana's care at Texas Children's Hospital began in the months before her birth due to a severe congenital heart defect. Her family feared the worst when she was also born prematurely. But at only 17 days old, Juliana received a new heart. Your donation to the **Promise** Campaign can help offer the sickest patients a new chance at life.



Make your promise. Donate today.
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Today, Jeston's infectious smile is wider than ever following a successful heart transplant. He is healthy and happy, and looks forward to the day he can step out onto the football field.



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