Best Foot Forward
A Strong Start for Mothers and Babies
Dear Friends,

Every day, we have the privilege of welcoming our tiniest patients into the world. For those who need some extra support, our specialists at Lucile Packard Children’s Hospital Stanford — from neonatologists and obstetricians to nurses, researchers, and more — are available to ensure the best outcomes even in the most complex pregnancies and births. And once a baby is born, the extraordinary care continues. Our hospital is still one of the only places in the country to provide a continuum of care that begins before conception and extends through pregnancy and delivery, into childhood and beyond.

This vision for providing comprehensive care for mothers and babies began with our founder Lucile Packard and still guides and inspires us today as we care for families like Elijah’s and Will’s, featured in this issue of Lucile Packard Children’s News. Through research partnerships with our Stanford University colleagues — ranging from bioengineers to sociologists — we are able to continuously improve diagnostics, treatments, and practices for our patients. This environment of interdisciplinary collaboration is the key to future discoveries.

Thanks to the support of friends like you, and partnerships with organizations like the March of Dimes, we have been able to save the lives of babies who just a generation ago may have had a much different future. There is still much to learn, and with your help we will continue to transform the lives of more mothers, babies, and families here and around the world.

Sincerely yours,

David Alexander, MD
President and Chief Executive Officer
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Everyday about Elizabeth Rodriguez-Garcia’s pregnancy had been perfectly normal. She’d had morning sickness on occasion and felt a little tired some days, but at 25 weeks, the only real news she and her husband, Salvador Alvarez, expected to hear during a routine ultrasound in July 2013 was the sex of their baby. In anticipation, the couple even brought his mother and her grandmother along to the appointment at her local obstetrician’s office in Salinas so they could see the baby’s images, too.

As the family crowded into the room and the lights were dimmed, the first grainy black-and-white pictures appeared on the monitor. Everyone was excited to see the baby’s tiny body, head, arms, and legs. Within minutes, however, it was clear something was wrong.
The ultrasound technician found an unexpectedly large dark spot where the baby’s left lung should be. A more detailed image was needed and Elizabeth was sent five miles across town to the Stanford Children’s Health Perinatal Diagnostic Center in Salinas, where technicians conducted another scan.

As a nervous Elizabeth waited for news about what might be wrong, her ultrasound images and medical records were being digitally sent 80 miles to the Center for Fetal and Maternal Health at Lucile Packard Children’s Hospital Stanford.

In an instant, both mother and baby became a concern of the center’s medical director, Susan Hintz, MD, MS Epi, and a team of doctors who would address every aspect of their care — from the simple to the complex, and everything in between.

Established in 2011, the Center for Fetal and Maternal Health, part of our hospital’s Johnson Center for Pregnancy and Newborn Services, provides comprehensive care and critical services to mothers and babies in high-risk pregnancies throughout the Bay Area and beyond.

Jumping into Action

Almost as soon as Elizabeth’s ultrasound arrived at our hospital, Hintz and several pediatric and obstetric specialists began examining her images and medical records. Stephanie Neves, administrative coordinator for the center, got to work setting up an array of appointments. By the time Elizabeth and Salvador stepped inside the hospital a few days later, Hintz and her team were ready to give them a diagnosis, a prognosis, and a plan that they believed could save the baby’s life.

“The diagnosis was rare: a congenital pulmonary airway malformation, also known as a CPAM. The baby had developed a large, abnormal cyst in the lower left side of his lung. The cyst, full of fluid, was impeding growth of the lung; it was so large that it also was compressing his esophagus and pushing on his heart.

Causing even more concern, a new ultrasound conducted that morning showed that in just a few days the cyst had grown even larger. The baby was collecting more fluid than expected and was at risk of dying in utero from a condition known as hydrops.

After much consultation, the doctors told Elizabeth and Salvador that inserting a shunt through her to the baby and draining the cyst into the amniotic fluid offered the baby the best chance of survival.

Elizabeth and Salvador agreed. A week after the cyst was first found, Jane Chueh, MD, director of prenatal diagnosis and therapy, inserted a large needle into Elizabeth’s abdomen, led it through the baby’s chest, and placed a small rubber shunt through the needle into the cyst. It was the first time Chueh had performed this procedure at Lucile Packard Children’s Hospital Stanford.

“It immediately started to drain,” says Chueh. “It was like popping a water balloon. All of the fluid came out in seconds.”

Relieving pressure from the cyst came at a critical time, adds Chueh. Although the cyst partially refilled the following day, it stabilized at a more manageable size for the baby and didn’t recreate the earlier pressure on his chest. More importantly, the fluid retention or hydrops that doctors worried was endangering the baby’s life improved dramatically.

Watching and Planning

After the procedure, Elizabeth initially lost then quickly regained her amniotic fluid and spent a few more weeks undergoing near-daily
ultrasounds to make sure the baby was okay. At 30 weeks, Elizabeth was ready to be discharged. But Hintz and her team worried that a complication might develop or that Elizabeth could go into preterm labor, so rather than send her back to Salinas — 90 minutes away — a social worker provided her with a fully furnished apartment just minutes down the road, where she could be close by if something unexpected happened.

In the meantime, Hintz and her colleagues drew up a new plan — this one for delivery. A fetal MRI, taken at 37 weeks, helped assess the amount of normal lung tissue and showed that once the baby was born and relying on his own lungs to keep him alive, the cyst would need to be removed immediately to prevent his breathing from being obstructed.

Importantly, notes radiologist-in-chief Richard Barth, MD, the fetal MRI spared the baby from having to undergo a CT scan to further delineate the lung mass — involving radiation and possibly additional anesthesia exposure — after birth and prior to undergoing the much-needed surgery.

Elizabeth carried her baby to 39 weeks of pregnancy, much longer than anticipated.

To simplify the transition between procedures, a Cesarean section was scheduled for an operating room, instead of in the labor and delivery unit, which allowed the baby to be quickly moved to a fully staffed and prepped operating room right after birth.

On November 25, 2013, a team of three dozen medical specialists assembled in two adjoining rooms. There were neonatologists and anesthesiologists. Radiologists and surgeons. Nurses and respiratory therapists. Hintz was there, as was Chueh, who delivered the baby by C-section, and Alexis Davis, MD, a neonatologist, who had participated in every discussion about the baby’s care and health.

“We had everyone on deck,” says Davis. “We had to be prepared because we knew he could have significant lung and breathing problems at birth.”

Standing by and waiting just for the baby, who would be named Elijah, was a team of doctors and medical experts led by pediatric surgeons Karl Sylvester, MD, and Matias Bruzoni, MD. Within minutes of his birth,
Elijah was moved quickly into the nearby operating room. In a two-hour procedure, Sylvester removed both the cyst and more than two-thirds of the baby’s lung that was adversely affected by the growth.

“Our ability as an institution to provide all these subspecialists in two rooms to care for both the mom and the baby is what led to the successful outcome for this family,” Sylvester says. “It made a huge difference in this young family’s life; without it, he may not have survived at all.”

Elijah remained in the hospital’s Neonatal Intensive Care Unit, where he was closely monitored for a month, while his parents stayed nearby at the Ronald McDonald House at Stanford.

On Christmas Eve, Elijah’s parents took him home to Salinas — the best gift they could ever have, says Salvador.

It’s too soon to tell what the longer term effects will be on Elijah’s lung, says Sylvester. Lungs continue to grow and remodel until a child is about 7 years old, so there is a good chance Elijah’s lungs will grow to a normal size. His path so far is encouraging and his doctors continue to manage and monitor his care.

“This was a fantastic outcome for Elijah and his family,” says Hintz. “Our multidisciplinary team carefully and thoughtfully considers the best treatment approach for each of these challenging cases. We are extremely fortunate to have the expertise and experience here at Lucile Packard Children’s Hospital to assure the best possible outcomes for extremely complex fetal patients and their families.”

“He looks like a completely normal baby,” Elizabeth says. “If you see him, you’d never know what he went through and that he doesn’t have most of his left lung. The cyst is completely gone.”

Salvador describes Elijah as a healthy, active, and happy baby, whose only physical sign of his near-catastrophic condition is the fading seven-inch scar on his chest. He has a big appetite and loves to laugh and play. He pulls himself up and walks along the family’s furniture.

“I feel blessed to have met the doctors at Lucile Packard Children’s Hospital,” adds Elizabeth, who recently returned to work as a nursing assistant. “I felt safe and comfortable the whole time I was there. I felt like they were my family and that I could trust them.”

Salvador and Elizabeth sit with baby Elijah in our Neonatal Intensive Care Unit.
“I feel blessed to have met the doctors at Lucile Packard Children’s Hospital. I felt like they were my family and that I could trust them.”

- Elizabeth Rodriguez-García, Elijah’s mother
Working quietly in his lab, a statistics researcher analyzes the levels of pollutants in California’s Central Valley. Across campus, an immunologist looks at the reams of bacteria that reside in the human digestive system. And in another lab, a team of bioinformatics postdoctoral fellows tracks thousands of entries on biological data and gene types.

They are among the more than 200 specialists in obstetrics, statistics, sociology, microbiology, public health, nutrition, genetics, immunology, and other diverse fields taking part in the March of Dimes Prematurity Research Center at Stanford, a bold new enterprise to solve one of medicine’s most difficult challenges — premature birth.

A global study released in October shows that prematurity is now the leading cause of death globally to newborns and to children under 5 years of age. Worldwide, about 15 million babies are born prematurely each year, and more than 1 million die within their first 28 days. Among the more than 4 million babies born in the U.S. each year, one in eight arrives too early.

The earlier a baby is born — at less than 28 weeks gestation in cases that are considered extremely preterm — the more complications the child will likely face. The cost to society is enormous.

Despite its frequency and impact, the causes of premature birth remain elusive, and decades of research have done little to reduce its occurrence. Only small inroads have been made in understanding the multiple factors behind its origin and in developing strategies to prevent early births.

“We need a different way of thinking that removes any preconceptions of what causes a premature birth and where and when to intervene,” says principal investigator David Stevenson, MD, the Harold K. Faber Professor of Pediatrics.

“The problem will not be solved by taking a traditional silo approach, with researchers focused on one disci-
pline, one problem, or one perspective at a time,” adds Stevenson, who is also director of the Johnson Center for Pregnancy and Newborn Services at Lucile Packard Children’s Hospital Stanford.

A New Approach

The prematurity research center is based on a new concept called transdisciplinary research, which focuses on a single issue from multiple starting points — creating promising collaborations that link experts who may not normally interact. The system uses diverse perspectives to find new solutions to a problem that has not improved in the last 30 years.

In addition to Stevenson serving as principal investigator, the research center benefits from the joint leadership of three co-principal investigators representing different fields: Maurice Druzin, MD, professor of obstetrics and gynecology – maternal fetal medicine; Gary Shaw, PhD, research professor of neonatology; and Paul Wise, MD, MPH, the Richard E. Behrman Professor in Child Health and a professor of health research and policy.

“Prematurity is not one thing but a broad category of processes,” says Wise. “A transdisciplinary approach allows us to create a new common language to explore a complex issue that has so far eluded a solution.”

The center, launched at Stanford in 2011 with $20 million in funding from the March of Dimes over 10 years, is the first of its kind in the country and the first of five centers planned for academic medical centers across the U.S.

Its goals are to:

- Understand the pathways that lead to preterm birth
- Predict which women are at risk of delivering early
- Translate research into clinical interventions and policy changes to prevent preterm delivery
- Reduce social disparities that contribute to preterm birth

“There has been progress in identifying external risk factors, but we still don’t know what makes them risk factors,” says Stevenson, who is also senior associate dean for maternal and child health at Stanford Medicine. “What is it about an influence like stress that causes changes in the mother’s biology? We want to define the processes responsible for these changes and then target those molecular or cellular pathways.”

From environmental risk factors to fundamental signaling pathways to the genetic interactions between the mother and fetus, the center’s teams look at prematurity from all angles. Each week, about 30 researchers, post-doctoral fellows, and students gather at “Preemie Wednesday” sessions to discuss ideas, make presentations, and share their progress.

“The room is full of people who are thinking creatively,” says Ceccele Quaintance, administrative director. “They’re eager to talk about what they are doing and to take part in the larger network.”

Shaw describes the process as “a scientific soup, putting together mountains of data and coordinating top experts in seemingly unrelated fields. Then we plan to parlay that into implementable steps.”

Bridging the Gap

Though premature infants in the U.S. are more likely to survive — and thrive — than those born elsewhere, infant mortality rates are still higher here than in most other developed countries. In one recent study, the U.S. ranked 131st in the world for its rate of preterm births, on a par with Somalia, Turkey, and Thailand. The high infant mortality rate is directly related to the high numbers of premature births, with
4,000+ babies get a strong start every year at Lucile Packard Children’s Hospital Stanford.

We provide advanced treatment for preemies.

**THE FACTS**

In the U.S.

1 in 8

or

half a million

babies are born prematurely each year

and

Premature birth costs society

$26 billion each year

Around the world

15 million

babies are born prematurely each year

and

The no. 1 cause of infant mortality is prematurity

**OUR JOHNSON CENTER FOR PREGNANCY AND NEWBORN SERVICES INCLUDES**

- **Perinatal Diagnostic Center**
  - A full range of diagnostic, therapeutic, and counseling services from preconception through delivery

- **Fetal & Pregnancy Health**
  - A complete continuum of care for complex fetal patients, expectant mothers, and families

- **Neonatal Intensive Care Unit**
  - Caring for critically ill newborns with complex care needs or those needing a little extra support at birth

- **Developmental Pediatrics**
  - Clinical services for newborns, infants, and children with or at risk for developmental or behavioral difficulties

Our Prematurity Research Center is a 10-year project, funded by the March of Dimes, which seeks to understand, reduce, and prevent prematurity.

**ABOUT OUR RESEARCH**

“Over the past 30 years, the rate of preterm births has remained an intractable problem. We now need to take a different kind of approach to solving it.”

— David Stevenson, MD, principal investigator

200+ Stanford researchers are now working together to solve the problem of prematurity.
a disproportionate number occurring in mothers from underrepresented minorities and low income.

“We are looking at health inequalities and health disparities in the larger, global setting,” Wise says.

The center’s transdisciplinary approach means that investigators and clinicians collaboratively determine how best to implement research findings as bedside treatments and to evaluate strategies for prevention and diagnosis. Together, they are compiling data on social, biological, and clinical factors that reflect prenatal and obstetric health, and illuminate the contributing factors to preterm birth.

“We have an advantage because vital data sets already are in place, but it takes time to create a complete picture of vital phenomena,” says epidemiologist Jeffrey Gould, MD, the Robert L. Hess Professor in Pediatrics.

As director of the California Perinatal Quality Care Collaborative, Gould oversees a network of more than 130 California hospitals that provide intensive care to newborns. He uses the statewide data to identify which mothers and babies are at high risk for poor outcomes and to bridge the gap between research and clinical care.

“Since prematurity is not homogenous, we are looking at areas that show increased incidence,” Gould says. “We are searching for what’s driving the phenomenon. Once we find the drivers, we can find a solution.”

Deeper Insights

This partnership with the March of Dimes recognizes that we are willing to try new things and solve problems creatively,” Stevenson says. “Team science is about making new connections, which Stanford is known for, and the issue of prematurity has introduced a sort of inspirational glue.”

Some causes and risk factors for preterm births have been established, such as smoking, drinking while pregnant, high blood pressure, and diabetes. But these insights have not led to widespread preventive measures or reduced the numbers of extreme preterm births. There is such a wide range of possible factors — biological, behavioral, social, physical, and environmental — as well as their interactions, that finding one starting point is most unlikely.

Instead, the center’s focused attention is pointing to a more integrated, preventive approach. Work taking place at the center is providing deeper insights into the inflammatory and infectious processes that appear to be harbingers of premature births, and early findings have helped to introduce preventive protocols.

A project headed by David Relman, MD, a professor of infectious disease and of microbiology and immunology, found that infection of the amniotic fluid is a common cause of preterm labor and delivery, and that affected fetuses may be predisposed to short- and long-term complications. He and his team plan to determine whether infections can be detected before the onset of preterm labor, which could lead to new prevention or treatment strategies.

Another project, headed by Shaw, analyzed the relationship between a woman’s weight and the likelihood of a preterm delivery. The study, the largest of its kind, found that women of all races who are obese before they become pregnant face an increased risk of delivering an extremely preterm baby (less than 28 weeks gestation), but weight had no effect on preterm or late preterm births (between 28 and 37 weeks). His findings clarify the connection between obesity and the risk of preterm delivery, and suggest that premature birth may have different causes at different stages of pregnancy.

Bioinformatics expert Atul Butte, MD, PhD, associate professor of pediatrics in systems medicine and genetics, and by courtesy, of computer science, blends sophisticated computer algorithms, powerful computer analyses, and publicly available databases to identify genetic and environmental factors associated with premature birth. His project isolated two blood proteins that signaled the presence of genes associated with preeclampsia, a condition that causes high blood pressure and preterm delivery. His team found that certain genes, when combined with exposure to environmental agents like pollution, allergens, and nutrition, raised the risk of premature birth.
Other researchers are looking at the relationship between genetics and the environment, changes in the mother’s microbiome (the microorganisms living in the human body), and the interval between pregnancies.

“In some ways, the technology is not the hard part and the data are coming fast, or are already there,” Butte says. “The hard part is now figuring out what question to ask. Then we can write the software to answer it.”

Making a Difference

The center and the March of Dimes have already made an impact on late preterm births by introducing guidelines for physician intervention. From 1990 to 2006, the percentage of women whose labor was induced before 39 weeks more than doubled. In addition, many expectant mothers were scheduled for elective repeat Cesarean sections prior to 39 weeks. Because due dates are only estimates, a delivery scheduled for 37 or 38 weeks may actually result in a preterm birth. Meanwhile, the use of fertility treatments resulting in multiple births also pushed up the rate of preterm births.

A national campaign to educate mothers and physicians about the consequences of induced labor has already dramatically reduced elective induced labor at less than 39 weeks. Because caregivers differ in how they support women near the end of pregnancy and in their judgment about when to recommend induction, the campaign established specific, measurable criteria for inducing labor. Changes in the timing and strategy of fertility treatments, which lead to more multiple births, also pushed up the rate of preterm births.

“Nearly every hospital in the U.S. has adopted the toolkit, and the result is that late preterm rates have dropped,” says Druzin. “The situation was fixed by a change in practice. But for extreme preterm births, there has been little improvement. Early preterm is harder to fix: It’s not about delivery, it’s about development.”

Druzin has also been instrumental in implementing new criteria for treating preeclampsia and eclampsia. A task force Druzin chairs has established

How Your Support Helps

Private philanthropic support has played an integral role in expanding clinical care and research to ensure a continuum of care for expectant mothers, babies, and children. From the founding gift made by Ann and Charles Johnson to establish the Johnson Center for Pregnancy and Newborn Services, to the March of Dimes grant for prematurity research and the loyal support of donors at all levels, our philanthropic community has transformed our hospital’s ability to care for and understand the needs of its tiniest patients.

While much has been achieved, there are still many unmet needs as our hospital cares for a growing number of families with complex conditions. Support for the following would ensure continued advances in care for future generations of children and families.

Endowed Chairs

An endowed chair, the highest honor that can be awarded to a faculty member, would enable our hospital and School of Medicine to recruit and retain leading physician-scientists who will teach and mentor the next generation of care providers.

Endowed Fellowships & Faculty Scholar Awards

Fellowships and faculty scholar awards provide advanced training and research support for talented young physicians poised to become the next generation of leaders.

Research Support

Expendable support for research personnel, equipment, and infrastructure will enable our faculty to make exciting breakthroughs to improve care for mothers and babies. Endowed research funds can be established with gifts of $100,000 or more.

General Support

Gifts of all levels help ensure that we can continue to care for all local families, regardless of their ability to pay for services. Gifts can be made online at supportLPCH.org.

For more information about giving opportunities, please call (650) 498-7641 or email charleen.cohen@lpfch.org.
guidelines on diagnosing and managing these conditions, and the toolkit has been downloaded more than 1,000 times in 48 states and requested by hospitals in Mexico, South America, and Europe. Follow-up data already are being incorporated into additional studies to introduce further improvements.

He predicts that rather than using a single diagnostic test, practitioners will apply multiple factors to create a risk profile that includes income, race, diet, stress, and environmental exposure, as well as the presence of bacteria, inflammation, and genetic markers that may indicate an increased likelihood of preterm birth.

**Steps in the Right Direction**

As part of a larger consortium, Stanford is leading the way in translating the center’s scientific insights into care that will benefit newborns everywhere and impact health worldwide. The close affiliation of the center’s scientists and clinicians, and its access to the intellectual and technological resources of the entire university, make the promise of transdisciplinary research especially encouraging.

“We have set the groundwork of what team science means,” Shaw says. “We have shared our knowledge with other organizations and will collaborate closely with the other March of Dimes centers. Our role is that of institutional mentor.”

The center’s leaders expect their work to evolve over time as they collaborate with other institutions and incorporate additional areas of scientific inquiry. New perspectives are also likely to arise from fellows and trainees who are developing expertise and building their own research portfolio.

Stevenson adds that the team aims to work with and complement the efforts of colleagues at the University of California, San Francisco, who are beginning to tackle the important problem of prematurity as well.

Druzin predicts that the center will contribute to incremental decreases in premature births, particularly through the development of physician toolkits and public education.

Center investigators are optimistic that within the next five to 10 years, they will have a well-developed picture of the causal mechanisms behind extreme preterm delivery and practical prevention techniques to offer expectant mothers.

“In the past, I thought we might never solve the problem of prematurity,” says Gould. “But now, after three years with the center, we have already made important inroads. I think we are on our way to making significant changes for mothers and babies both locally and around the world.”

“Nearly every hospital in the U.S. has adopted the [educational] toolkit, and the result is that late preterm rates have dropped.”

- Maurice Druzin, MD

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- Maurice Druzin, MD
On the day of Will’s birth, 1s were running wild. He was born in the 1 o’clock hour, on the 1st month of the year, on the 11th day of the month. He weighed a mere 1 pound, 11 ounces.

Will was born three months before his due date, at 24 weeks and 5 days into my pregnancy. He was a micro-preemie — defined as a baby born weighing less than 1 pound, 12 ounces, or before 26 weeks gestation.

In a way, we were prepared for a lengthy NICU stay. As a cancer survivor, I had been under the care of the high-risk maternal-fetal team at Lucile Packard Children’s Hospital, including my obstetrician Deirdre Lyell, MD, since my eighth week of pregnancy. At 20 weeks, I was admitted to the antepartum unit due to complications, and by 22 weeks, we were having unfathomable discussions about possible outcomes for our son.

According to the Centers for Disease Control, preterm birth affects one of every eight infants in the United States. This means that every day, parents who joyously expect a normal delivery and a homecoming must instead leave their fragile newborns in the care of doctors, nurses, and machines.

For whatever reason, my husband, Scott, and I had the impression that the NICU would be a quiet, contemplative environment. It’s quite the contrary. It’s intense. Codes. Alarms. X-rays. Bloodwork. Rounds. Life and death decisions. All of this activity surrounds you and fills your mind as you try to stay strong to support your family and be the best advocate for your little one.
We were also under the impression that medicine was equal parts great doctors and innovative technology. But what we quickly realized is that empathy plays an equally important part in this equation.

In the hospital, Scott and I knew everyone. Everyone knew us. We had our “NICU family” made up of other parents, nurses, doctors, and specialists. Like all parents, Will’s good days were our good days. His bad days were our bad days. The difference? On those good days when I knew it was okay to walk away from his isolette, I didn’t. I was somewhat paralyzed. No one asks how you are doing; the reality is that they just know.

What is the impact of this environment? A 2010 Stanford University School of Medicine study revealed that more than half the parents whose babies were in the NICU for an extended period of time either had Post-Traumatic Stress Disorder (PTSD), or were at high risk for developing it. PTSD, of course, is best known as the disorder soldiers develop after trauma in combat. This time though, it’s on the home front resulting from the battlefield known as the ICU.

Will endured several serious infections, septic shock, chronic lung disease, retinopathy of prematurity, patent ductus arteriosus, and silent aspiration. What helped me — especially in the early days of his NICU stay — were his amazing caregivers, including primary nurses Helen Bush, Cathy Newton, and Janet Martin, and his development specialist Lori Bowlby. They taught me to understand Will’s cues and how to comfort him through an isolette while he was hooked up to more machines than I choose to remember. I learned about the importance of kangaroo care and held our little guy as much as I could when he was stable.

Discharge day was bittersweet. On one hand, we were thrilled Will was coming home. On the other, we were terrified because we knew we’d be alone. As parents of a micro-preemie, we became well medicalized. However, Will required medical equipment, oxygen, numerous medications, early interventionists, and frequent visits to the specialists post-discharge. And he didn’t come with an instruction manual!

Now nearly 2 years old, Will continues to fight battles every day that are typically taken for granted—drinking from a cup, opening his mouth for purees, sitting, walking, talking. He’s still on oxygen and has a feeding tube to ensure he obtains proper nutrition.

But just as I was defined by Will, the way he entered the world has defined him, blessing us with a son of amazing courage and endless personality.

He is now the kid who loves to color, drives his parents crazy with his fake coughs, bats his enviably long eyelashes, and gives hugs like no one’s business. Perfect strangers approach us and ask, “What’s wrong with him?” I’ve come to welcome these encounters so I can share a little bit about his journey and let people know the littlest guys and gals do make it — and, often, catch up.

Life is fairly simple. People are the same everywhere — they want to live a better life than their parents and want their kids to live a better life than themselves. It is this thinking that motivates parents and caregivers of a child with a life-threatening illness. It is this thinking that drives doctors, nurses, and specialists to an intense devotion to children. It is this thinking that reminds my husband and me to never overlook any moment with Will. He has touched so many and reminds us each day that where there’s a will, there’s a way!

In honor of their son Will, Brittany Lothe and her husband, Scott Bolick, created Will’s Way Foundation to provide support, spot grants, and solutions to improve children’s health in the Bay Area. To learn more, visit willswayfoundation.us.
Fifty years ago, a premature baby weighing less than 3.3 pounds had only a 30 percent chance of survival. Today, thanks to major advances in neonatal medicine, the survival rate has climbed to nearly 80 percent.

But how do these “preemies” fare once they leave the neonatal intensive care unit (NICU)?

Many grow up to be healthy adults. But half of newborns with extremely low birth weight will develop problems with learning, and one in 10 will develop cerebral palsy.

To address these issues, scientists at Lucile Packard Children’s Hospital and Stanford University School of Medicine are searching for clues to identify early signs of developmental disorders and advancing intervention strategies to improve outcomes for NICU graduates.

Trajectory of Care

Long-term follow-up is the key to better outcomes for preterm children, says neonatologist Susan Hintz, MD, MS Epi, who is also professor of pediatrics at Stanford and medical director of the hospital’s Fetal and Pregnancy Health Program in the Johnson Center for Pregnancy and Newborn Services.

“We need to move toward a smooth trajectory of care that starts with the expectant mother, goes through the neonatal period, and continues all the way through childhood,” Hintz says. “It is very important for families to have consistent follow-up with a team of developmental pediatricians, occupational therapists, physical therapists, and others who can recognize the early signs of developmental, behavioral, language, or motor challenges.”

Jessica Rose, PhD, and her team at the Motion & Gait Analysis Laboratory study the connections between prematurity, brain development, and a child’s motor skills.
One such specialist is Jessica Rose, PhD, director of the Motion & Gait Analysis Laboratory and associate professor of pediatric orthopaedics at Stanford, who has evaluated hundreds of young children with symptoms of cerebral palsy, such as problems with muscle control, walking, and balance.

Children who are unable to walk by age 2 are often diagnosed with cerebral palsy. Yet studies suggest that treating a child before these symptoms appear can result in better outcomes.

There is evidence that early intervention works well if it’s intensive and strategic, Rose says. She points to new research showing that 60 hours of intensive upper-limb activity over a two-week period can improve muscle control in young children with cerebral palsy.

Unfortunately, Rose says, the vast majority of kids are not getting early intervention, because it is not currently possible to accurately predict which preterm infants will develop motor impairment and other disabilities.

In 2010, in an effort to identify the early-warning signs of cerebral palsy, Rose and her colleagues began recruiting the parents of preterm infants in our hospital’s NICU for a groundbreaking study. The team analyzed blood samples and brain images from 102 newborns, and conducted follow-up examinations 18 to 22 months later.

Each infant was given a routine brain scan at approximately 37 weeks gestational age prior to discharge from the NICU (near the time they would have been full-term) using conventional magnetic resonance imaging (MRI). Sixty-six of the infants also underwent a newer MRI technique known as diffusion tensor imaging (DTI), which creates detailed images of the connective fibers, or white matter, in the brain by tracking the diffusion of water molecules around each fiber.

While the conventional MRIs found evidence of brain abnormalities, this did not correspond to the child’s neurodevelopmental or gait outcomes at 18 to 22 months. The DTI scans showed microstructural problems in two critical areas of white matter: the corpus callosum, which connects the two hemispheres of the brain, and the internal capsule, the region that links the sensory-motor cortex to the brain stem and spinal cord.

“We found that microstructural abnormalities in the corpus callosum and the internal capsule at 37 weeks were significantly correlated to problems with the child’s cognitive and motor development and walking velocity and stability at 18 to 22 months,” Rose says.

Blood samples collected in the NICU provided additional clues. Infants with low amounts of albumin and higher levels of C-reactive protein (CRP) in their bloodstream developed motor and cognitive problems 18 to 22 months later. “CRP and albumin are part of the body’s response to infection and inflammation,” Rose explains. “We found that the level of these proteins during the first two weeks of life was significantly correlated with outcome.”

These results are consistent with studies showing that infections and brain injuries during pregnancy or birth increase a child’s risk of neurodevelopmental problems. But more research is needed in larger populations to confirm the long-term predictive value of neonatal DTI scans and blood-protein analysis, says Rose.

“We are trying to secure funding for a follow-up study to assess each child’s neuromotor performance at age 6,” Rose adds. “Our goal is to find the very best predictive model that will enable us to guide intervention from the moment the child is discharged from the NICU.”
Language and Learning

As they grow older, many children born preterm may also face cognitive challenges.

“About 50 percent of children born more than eight weeks early or at an extremely low birth weight develop problems with language, learning, and executive function,” says Heidi Feldman, MD, PhD, the Ballinger-Swindells Endowed Professor in Developmental and Behavioral Pediatrics at Stanford.

These children score below their peers on assessments of language and reading, and are not as good as peers at planning, organizing, resisting temptation, or focusing. Some develop attention deficit disorder and anxiety, which can persist into adulthood.

Over the past decade, Feldman’s lab has been using brain imaging and behavioral studies to understand the relationship between prematurity and language and reading.

By conducting a statistical analysis of children ages 9 to 16, researchers found three cognitive domains where prematurity contributed specifically to difficulties: verbal memory, reading comprehension, and linguistic processing speed — how quickly the child processes sentences — which may make it harder for children to succeed in a classroom setting.

Feldman began a collaboration with Stanford psychologist Anne Fernald, PhD, to determine at what age slower language processing skills could be detected.

“We found a strong association between the speed at which toddlers process familiar words at age 18 months and the size of their vocabulary at age 3 years,” Feldman says. “This finding suggests that speed of processing may help predict which children are going to learn language efficiently and which ones may experience delays in the development of their vocabulary and other language skills.”

At ages 9 to 16, brain scans of children born preterm indicate a correlation between the structural integrity of the brain’s white matter and language and reading skills.

“Think of the brain as a collection of little computers that are massively interconnected,” Feldman explains. “The white matter of the brain is like the wires that connect the computers. Linguistic speed of processing might be a very sensitive indicator of whether those connections are healthy or injured.”

White matter may also play a role in the development of reading abilities. Feldman’s research has found that compared to full-term kids, children born preterm are less likely to have begun reading at age 6 years. She is now looking at whether characteristics of the white matter predict who is delayed in learning to read and whether the characteristics of white matter change over time and as the child learns to read.

Feldman notes that the ultimate goal is to find novel ways to improve language and reading skills in the children born preterm to reduce their risks for delays and disorders. Right now, education and therapy is not customized to children based on their medical history or their brain characteristics.

“We want to learn whether children born preterm require a different approach than children born at term even if they show similar patterns of developmental delays,” she explains. “We hope to design studies to
evaluate the kind of education and therapy these young people should receive in order to gain maximum advantage from their education.”

Broadening Our Reach

The long-term care approach has been adopted more broadly in recent years through the statewide High-Risk Infant Follow-Up Quality of Care Initiative, of which Hintz is a co-principal investigator. Sponsored by California Children’s Services (CCS), the initiative brings together more than 70 high-risk infant follow-up programs across the state.

In 2009 CCS began coordinating with the California Perinatal Quality of Care Collaborative, so more than 130 NICUs across the state could work together and share findings. A primary goal for this linked program was to determine whether preterm infants are routinely referred for follow-up visits when they are discharged from the NICU, and how this transition of care from the NICU to the community can be improved.

“The very first step in being able to identify children who could benefit from early intervention is to make sure they are referred to a qualified developmental team,” says Hintz. “In California, every infant weighing less than 3.3 pounds at birth should be referred to a high-risk infant follow-up program. But we found that these referrals only happen about 80 percent of the time.”

For many families, getting to the first follow-up visit can also be a challenge. Hintz and her colleagues are now evaluating the statewide program to identify factors, such as the distance from the home to the follow-up site, clinical circumstances of the child, and other family challenges and program barriers, that may keep some children from making it to that all-important initial visit.

On the national level, Hintz is leading a study funded by the Eunice Kennedy Shriver National Institute of Child Health and Human Development Neonatal Research Network, which focuses on understanding and improving outcomes for extremely preterm and critically ill newborns. Our hospital is one of only 16 academic centers across the United States to participate in the study.

In the ongoing national study, more than 500 preterm babies, born at least 12 weeks early, had a series of cranial ultrasounds and a brain MRI during their NICU stay. A developmental and neurologic follow-up visit was conducted at 18 to 22 months of age. The study aims to assess the value of early and later neonatal neuroimaging findings over and above other clinical risk factors, and whether cranial ultrasound—the current routine neuroimaging approach—or MRI could better help predict the child’s outcome.

“Our quality of care initiatives should not stop at the NICU door. We need to continue to evaluate processes to improve outcomes throughout childhood.”

Susan Hintz, MD, MS Epi

“Looking at how preterm children are doing at 18 to 22 months of age provides a very narrow window into their outcomes,” she says. Because there are many developmental processes that are not in evidence at such a young age, a more comprehensive study to follow these children to age 6 or 7 is now under way.

“Our quality of care initiatives should not stop at the NICU door,” Hintz adds. “We need to continue to evaluate processes to improve outcomes throughout childhood. Investing in early childhood gives us the opportunity to lift families, communities, and society by helping preterm patients achieve the best they possibly can as adults.”
Dianna and Timothy Murphy of San Ramon believe in paying it forward. Thankful that their 18-year-old son, Kevin, is alive today because of Lucile Packard Children’s Hospital Stanford, they now generously support the hospital as members of the Children’s Circle of Care.

“We understand the importance of life-saving medical care and the need for continued research and education,” Dianna explains. “We give to the Lucile Packard Children’s Fund to ensure this hospital can continue providing extraordinary care to kids in need.”

It was just a few years ago that Kevin was one of those children receiving extraordinary care.

Parents’ intuition told Dianna and Timothy that Kevin, then 12, needed help when his flu-like symptoms weren’t improving. After blood tests and transfers to multiple facilities, they arrived at our hospital, where doctors delivered an unexpected diagnosis: Kevin had dilated cardiomyopathy. His heart had grown two-and-a-half sizes larger than normal and was failing, causing other organs, including his liver, to struggle as well. The only solution was a heart transplant. Dianna and Timothy were devastated, but relied on the expertise of Kevin’s caregivers.

During the next several weeks, the medical team worked tirelessly to get Kevin healthy enough for his procedure. When a donor heart became available, a surgical team, along with Dianna and Timothy, wheeled Kevin through the Pediatric Intensive Care Unit to the sound of cheers and applause. The five-and-a-half hour transplant surgery was a success. “When we were able to finally see Kevin after surgery, we were amazed at how good he looked already!” Dianna recalls.

Today, Kevin runs track and field for his high school and even won a number of gold medals at the Transplant Games of America. And the Murphy family gives back to the hospital community that supported them when they needed it most. In addition to participating in the Children’s Circle of Care through financial gifts, Dianna serves as a parent mentor at our hospital, providing support to other families facing similar medical challenges and ensuring that they have an active role in their child’s care.

“Lucile Packard Children’s Hospital is very special,” Dianna says. “Not just because of the new state-of-the-art hospital expansion, but because of the people who work within that hospital. Kevin wasn’t the hospital’s first heart transplant, and sadly, he will not be their last. But the next expansion, along with continued research and education, will provide extraordinary care for future patients in need.”

The Children’s Circle of Care recognizes donors who give $10,000 or more annually. To learn more, visit supportLPCH.org.
Giving Today and Tomorrow
Auxiliaries Endowment Continues the Legacy of Commitment from Members

Our auxiliaries and affiliates are made up of more than 1,000 members between San Francisco and San Jose who host events and run businesses benefiting Lucile Packard Children’s Hospital Stanford. In 2013, the auxiliaries and their members donated more than $3 million to our hospital.

Building on this legacy of commitment is the auxiliaries endowment, which to date has grown to more than $15 million, and has helped create new initiatives and expand existing pediatric services and programs.

We recently met with Donna Horwitz, chair of the auxiliaries endowment, and Missy Ryan, chair of auxiliaries communication, to learn more about the power of the auxiliaries endowment, and to hear about how this endowment is working to ensure that our hospital remains an exceptional place for children and their families.

How did you become involved with auxiliaries?

Donna: I had just moved into the area, and my neighbor was very involved with the San Mateo-Burlingame auxiliary. Seeing her involvement was contagious, and I wanted to become more involved with my community. This was over thirty years ago, and I am still involved because of my deep commitment to the children and the care they receive at Lucile Packard Children’s Hospital Stanford.

Why is the auxiliaries endowment so important?

Missy: Like any endowment, the corpus of the auxiliaries endowment fund will increase over time, and each individual contributor is combining their gift with others to create something extremely powerful. This fund is particularly unique in that it acknowledges the investment of time, talent, and treasure to Lucile Packard Children’s Hospital Stanford. Leaving your legacy to the auxiliaries endowment is about recognizing the importance of not only philanthropy, but also service.

Who can give to the auxiliaries endowment?

Donna: The most wonderful thing about this endowment is that anyone can give, and there is no minimum threshold. Gifts made to the auxiliaries endowment are primarily done through the estate plans of auxiliary members and their families.

What does the auxiliaries endowment fund?

Missy: The auxiliaries endowment works in conjunction with our hospital to identify high priority projects and programs. In 2014, we completed the $5 million pledge to fund the auxiliaries endowment treatment center waiting room in the new hospital. The beauty of this fund is that through joining our legacies we are able to accomplish more than we ever could on our own.

Support the auxiliaries endowment

Auxiliaries and affiliates members, as well as their families, are invited to support the vision of the auxiliaries endowment, joining together to make a huge difference for our patients. To learn more, please visit supportlpch.org/auxiliaries.
Corporate Philanthropy
Stanford Federal Credit Union

Stanford Federal Credit Union has established itself as one of Lucile Packard Children’s Hospital Stanford’s most generous and consistent corporate supporters. Over the past decade, the organization has repeatedly demonstrated its commitment to the health of our community’s children through its support of patients, programs, and employees at our hospital.

This year, Stanford Federal Credit Union increased its giving to a new level with a five-year, $500,000 commitment to the expansion of our hospital. “As part of the Stanford community since 1959, we are honored to help sustain the environment of caring, innovation, and health at Lucile Packard Children’s Hospital Stanford,” says Joan Opp, president and CEO of Stanford Federal Credit Union. “We count many hospital employees as our members and the expansion ensures a bright future both for them and for the families in need of the hospital’s care.”

In addition, the credit union’s generosity extends to the hospital’s Art Cart program, which provides children with creative activities and a much-needed respite from medical treatment.

Our hospital’s employees also remain a strong focus for the credit union, through an ongoing campaign, “You Switch. We Donate. Kids Win.” Since 2011, for every Lucile Packard Children’s Hospital employee who opens an account, the credit union makes a donation to the hospital — totaling more than $22,000 to date. In addition, Stanford Federal Credit Union has helped recognize employees and physicians for their personal donations through its support of the hospital’s employee giving campaign, donating a book to the hospital library on behalf of every hospital employee who becomes a Monthly Giving Partner through the campaign.

Stanford Federal Credit Union is owned and operated by 50,000 members including the faculty, staff, students, alumni, and volunteers of Stanford University, Stanford Health Care, Lucile Packard Children’s Hospital Stanford, SLAC National Accelerator Laboratory, and 100 local companies.

To learn more about corporate giving, please visit supportLPCH.org/corporate.
Foundation Grants
Bear Necessities Helps Advance Diagnosis and Treatment of Childhood Cancer

Four researchers from Stanford University School of Medicine were awarded a total of $160,000 this summer from the Bear Necessities Pediatric Cancer Foundation for their efforts to advance diagnosis and treatment of childhood cancers.

The grant awards of $40,000 each will support the following projects:

Alejandro Sweet-Cordero, MD, associate professor of pediatrics, received support for his efforts to better understand a rare type of pediatric cancer called Ewing’s sarcoma. Ewing’s sarcoma is caused by a type of genetic change called a translocation. This translocation results in the production of a new protein called EWS/FLI-1.

Bryan Mitton, MD, PhD, clinical instructor in pediatrics, focuses on acute myelogenous leukemia (AML), a challenging-to-treat fast-growing cancer that starts inside bone marrow. Mitton seeks to understand the aberrant signaling — the communication system that governs basic cellular activities — that characterizes high-risk AML.

Marius Wernig, MD, PhD, assistant professor of pathology, will use the funding to further investigate a deadly brain cancer called glioma. Existing treatments for gliomas, or cancers of the glial progenitor cells in the brain, are not very effective and can have bad side effects, particularly in children. Wernig and his colleagues will attempt to identify key molecular changes that make normal glial progenitor cells cancerous, and target those, with the goal to develop more effective therapies with fewer side effects.

Viola Caretti, MD, PhD, postdoctoral scholar, received the award for her efforts to research high-grade gliomas (HGG), the leading cause of brain-tumor-related death in children. Caretti plans to study the role that neuronal firings play in influencing the growth of HGG cells. Ultimately, she wants to better understand the interaction between neurons and tumor cell growth so she can target this interaction and develop new treatments for HGG.

“We are proud to support researchers throughout the country who are making meaningful advancements toward finding a cure and therapies for pediatric cancers,” said Susan Mura, director of finance at the Bear Necessities Pediatric Cancer Foundation. “The work being done by researchers at Stanford University is critical to helping us fulfill our mission to eliminate pediatric cancer and provide hope and support for those touched by it.”

Chicago-based Bear Necessities Pediatric Cancer Foundation, whose mission is to eliminate pediatric cancer and provide hope and support to those who are touched by it, has awarded six grants to Stanford researchers since 2007.
IN THE
news

President of Slovakia Tours
Lucile Packard Children’s Hospital

Slovak President Andrej Kiska met with patients and even smiled for a "selfie."

In September, Slovak President Andrej Kiska visited our hospital to learn more about how we provide extraordinary care for children with cancer. Anne McCune, chief operating officer, and Michelle Monje, MD, PhD, a pediatric neuro-oncologist, provided an overview of our hospital and led the group on a tour of the Bass Center for Childhood Cancer and Blood Diseases, where President Kiska took time to meet with patients.

Transplant Innovator Celebrates 30 Years of Saving Lives

Three decades ago, babies with liver failure usually died because transplants were not offered to patients younger than 2. But an ambitious surgeon named Carlos Esquivel, MD, PhD, published research and advocated that even the smallest patients should be given access to transplants. Esquivel showed that liver transplants could be performed successfully in infants and young children, changing the medical field’s outlook on conditions previously considered fatal.

Since arriving at Stanford in 1995, Esquivel and his team have performed more than 600 liver transplants, including some multi-organ transplants in which patients also received another organ such as a heart, kidney, lung, or intestines. As chief of the division of transplantation and the Arnold and Barbara Silverman Professor in Pediatric Transplantation, Esquivel is lauded worldwide for his skill at performing transplants in very sick babies and children.

Buckle Up for Life
Advances Child Safety

In September, our hospital announced that it will offer Buckle Up for Life, a national education program created in 2004 by Cincinnati Children’s Hospital Medical Center and Toyota, as the latest addition to our comprehensive child safety initiative. Since 2004, Lucile Packard Children’s Hospital Stanford has provided car seat fittings for more than 22,000 families, and the Buckle Up for Life program will help our hospital reach even more members of the community.

“We are excited to be able to expand our passenger safety initiative with Toyota’s Buckle Up for Life program, providing car safety education for all family members, paired with hands-on car seat installation training,” said Sherri Sager, chief government and community relations officer at Lucile Packard Children’s Hospital Stanford.
$2.25 Million Challenge Grant to Fund Clinical Food Allergy Research

Groundbreaking food allergy research at Stanford University School of Medicine and Lucile Packard Children’s Hospital Stanford has received a major boost through the creation of a challenge grant by Jeff and MacKenzie Bezos.

In August, the donors established a $2.25 million matching challenge grant with the goal of raising a total of $4.5 million, which will help researchers identify root causes and develop novel approaches, including immunotherapy, to treat dangerous food allergies. The university must close the challenge grant within a year’s time.

Funding secured through the challenge will go toward the creation of an allergy research center at Stanford, led by Kari Nadeau, MD, PhD, an expert in the field of immunology, food allergies, and allergy immunotherapy, and an associate professor of pediatrics at Stanford University School of Medicine and Lucile Packard Children’s Hospital Stanford.

Nadeau’s team has developed the first combination, multi-food-allergy therapy that has been shown to safely desensitize food-allergic patients to up to five different allergens at the same time. Clinical trial participants who were treated with combined immunotherapy successfully reached desensitization earlier than participants who did not use this combination regimen.

To make a gift matched by the challenge grant, please visit give.supportLPCH.org/safar.

Pediatric Residency Program in Top Ten

The Stanford Pediatric Residency program has been ranked nationally among the top ten residency programs and best in California by Doximity and U.S. News & World Report. The ranking recognizes the work of Becky Blankenburg, MD, associate chair of education-residency programs, as well as her co-program directors and the residents for their development of the residency program and for their support in training of future caregivers.

Hyundai Hope on Wheels Surpasses $1 Million in Support for Cancer Research

On September 4, Hyundai Hope On Wheels and Bay Area Hyundai dealers awarded Lucile Packard Children’s Hospital Stanford a $250,000 Hyundai Scholar Hope Grant to support the work of Kathy Sakamoto, MD, PhD. Sakamoto’s research focuses on identifying pathways that cause acute lymphoblastic leukemia (ALL) and could lead to more effective approaches to treat children with ALL.

On hand for the event to share his story was Wesley Tiu, a Stanford student and one of Sakamoto’s patients.

This year marks a special milestone in our partnership with Hyundai: since 2004 our hospital has received more than $1 million from the Hope On Wheels program.
IN THE news

New Giving Website Launched

Our giving website has a new look! Visit supportLPCH.org to learn about ways to support patients and families at Lucile Packard Children's Hospital Stanford, as well as the child health programs at Stanford University School of Medicine. Also on the site, you’ll meet patients, doctors, volunteers, donors, researchers, and more on our blog, “For care, for cures, for kids.”

Best in Northern California for a Decade

Since the beginning of the U.S. News & World Report rankings for children’s hospitals in 2005, Lucile Packard Children’s Hospital Stanford has received the highest specialty rankings of any children’s hospital in Northern California every year.

This year we were the only Northern California children’s hospital with three specialty programs ranked in the nation’s top 10. Those specialties included Nephrology (#7), Cardiology (#8), and Pulmonology (#10). The Nephrology team’s ranking was tops in California, and the Pulmonology group was #1 in California and on the West Coast.

In addition, Lucile Packard Children’s Hospital Stanford was the only Northern California children’s hospital with five programs in the top 15, with Neonatology coming in #12 and Gastroenterology at #13. In all, Lucile Packard Children’s Hospital Stanford placed nine specialty programs in the U.S. News top 40.

Christopher G. Dawes, president and chief executive officer of Lucile Packard Children’s Hospital Stanford and Stanford Children’s Health, said, “Receiving such high rankings every year for the past decade from U.S. News is a wonderful distinction, and it speaks to our continual standing as one of America’s most extraordinary children’s hospitals.”

Cisco Gift Supports Prematurity Research

A gift of three state-of-the-art servers from Cisco will help investigators at Stanford’s March of Dimes Prematurity Research Center increase their capacity to store and analyze vast amounts of data about premature births. Led by David Stevenson, MD, the team will use the information housed on the servers to move closer to understanding the causes of preterm birth, as well as developing and testing interventions to reduce its incidence.

‘Donate Life’ Event at San Francisco Giants Game

On July 30, the San Francisco Giants held their 17th Annual Organ Donor Awareness Day. Our hospital has participated for many years, with patients and caregivers alike receiving recognition. In a pregame ceremony, Carlos Esquivel, MD, PhD, chief of the division of transplantation, was recognized as a pioneer in the field of transplant. Two of Esquivel’s patients who received transplants 25 years ago served as “ball dudes,” fielding stray balls during the game.

Support Website

supportLPCH.org

New Giving Website Launched

Welcome to our new giving website! Help us build healthier, happier lives for kids like these.

MAKEYOURGIFT

Every act of kindness makes a difference.

GIVETRIM

100% of your gift supports our patients.

COURAGE

We care for 71,875 children and immunocompromised mothers in 2015.

SEEYOURIMPACT


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‘Outstanding Achievement in Medicine’ for Hartman

Gary Hartman, MD, MBA, chief of pediatric general surgery, received the 2014 “Outstanding Achievement in Medicine” award from the Santa Clara County Medical Association. Hartman was presented the award in June for his longtime leadership in surgical care and his extraordinary service to patients and their families.

The award salutes “a physician who has made unique contributions to the betterment of patient care, for which he/she has received widespread recognition,” the Association said. The honor noted that Hartman has published extensively on subjects ranging from pediatric lung transplantation to esophageal atresia, and he has received worldwide recognition for his expertise leading the surgical separation of conjoined twins. In addition to his role with the surgery division, Hartman also serves as our associate vice president of medical affairs.

Ludwig Institute Elects Pizzo to Board of Directors

This summer Philip A. Pizzo, MD, former dean of Stanford University School of Medicine and a pediatric cancer care pioneer, joined the Board of Directors of the Ludwig Institute for Cancer Research, an international collaborative network of acclaimed scientists.

With more than 40 years of experience championing programs and policies to advance science, education, and pediatric oncology internationally, Pizzo is currently the David and Susan Heckerman Professor and professor of microbiology and immunology at Stanford University School of Medicine. He is also the founding director of the Stanford Distinguished Careers Institute, a year-long program that prepares established leaders for roles with social impact on local, national, and global levels.

Save the Date: child X Conference

On April 2-3, 2015, leading researchers and clinicians will gather at Stanford University School of Medicine to share and discuss the latest advances in child and maternal health research, with the aim of transforming the landscape of care through innovative collaboration. The two-day conference, called child X, will feature TED-style talks with keynote speakers covering the most salient health topics for children and expectant mothers including stem cell and gene therapy, the acceleration of digital health innovation, personalization of care, and the arc of development from fetus to adult.

This entirely new and unique conference on child and maternal health is sponsored by the Stanford Child Health Research Institute (chri.stanford.edu), in conjunction with Stanford Medicine and Lucile Packard Children’s Hospital Stanford. Organizers anticipate 300 participants from across the globe. Interested community members are welcome to attend. Information can be found at childx.stanford.edu.
St. Baldrick’s Foundation Supports Cancer Cure Research

The St. Baldrick’s Foundation, which holds head-shaving events nationwide to raise money for childhood cancer research, recently awarded nearly $1 million in pediatric cancer research grants to five physician-scientists at Stanford University School of Medicine and Lucile Packard Children’s Hospital Stanford: Samuel Cheshier, MD, PhD; Yoon-Jae Cho, MD; Michael Wei, MD, PhD; Erin Breese, MD, PhD; and Liora Schultz, MD.

Since 2005, St. Baldrick’s has awarded more than $152 million to support lifesaving research worldwide, making it the largest private funder of childhood cancer research grants.

McCune Speaks at Hospital of Tomorrow Forum

Anne McCune, chief operating officer, joined other top health care experts and policymakers at the U.S. News Hospital of Tomorrow leadership forum to address the critical challenges facing the hospital industry. The summit, held in Washington, D.C., aimed to develop strategies that will better equip hospitals for the future.

Ritter Recognized for Excellence in Nursing

Nurse.com honored Linda Ritter, RN, with the 2014 California’s Giving Excellence Meaning Award in Clinical Nursing, Inpatient. Ritter, a nurse in the Bass Center for Childhood Cancer and Blood Diseases, was recognized for her leadership in improving palliative care. She and her colleagues developed a comfort cart, a holiday giving tree, staff mini-retreats, and a palliative care manual. Other comfort measures include door decals, music, and quilts to provide excellence in pediatric palliative and end-of-life care.

Patient Celebrates 30th Anniversary of Heart Transplant

Thirty years ago, Lizzy Craze was approaching her third birthday, but her health was failing. Diagnosed with familial dilated cardiomyopathy, a heart transplant was Lizzy’s only hope, and she and her family turned to the experts at Stanford. Lizzy became the youngest successful heart transplant recipient in America, and today she is still going strong with her donor heart. To commemorate the 30th anniversary of the procedure, Lizzy, her family, and her doctors gathered at our hospital to reflect on how far pediatric heart transplantation has come, and on the hope for future patients. Lizzy’s inspiring story has been featured by numerous media outlets.
Champions for Children

Uforia Studios: Sweating for a Good Cause

At uforia studios in downtown Palo Alto, a fun and heart-pounding workout is always a given. The classes and instructors are full of energy and have made uforia a community favorite since it opened its doors in 2011 as a boutique fitness studio. This spring, however, getting sweaty also meant giving back.

“Lucile Packard Children’s Hospital Stanford felt like a natural choice for our spring charity event,” said Sarah Lux, owner of uforia. “We are committed to promoting healthy living and as a local business we are passionate about contributing to our community.”

For two weeks in May, more than 100 “uforians” came together to raise $1,420 for the hospital by competing in uforia’s Embrace the Sweat Team Challenge. The event fostered community spirit and healthy competition, as four teams battled it out for the grand prize and, more importantly, bragging rights. While sporting team colors, braving early morning classes, enduring five-minute planks, and participating in social media activities, competitors joined together to support our patients and families and raise awareness about children’s health.

“I loved how the Embrace the Sweat Challenge brought every client together in the most spirited form,” said Lisa Himmel, a participant in the challenge. “Not only did we challenge our physical capacity, we strengthened relationships with fellow uforians, from the clients to instructors. Furthermore, the fact that 100 percent of the proceeds went directly to Lucile Packard Children’s Hospital made the challenge that much more meaningful. As an educator in early childhood education, I felt my passion for helping kids propelled my determination throughout the challenge.”

Become a Champion for Children

Lemonade stands, toy drives, marathon runs—the possibilities are endless! You can host your own fundraiser for Lucile Packard Children’s Hospital Stanford based on your talents and passions, and we can provide resources to help you succeed. Best of all, 100 percent of proceeds will benefit the child health program of your choice.

Visit supportLPCH.org/champions to learn more.

In May, more than 100 “uforians” raised $1,420 for our hospital during the Embrace the Sweat Team Challenge.
At this time of year, we are especially grateful for our hospital’s friends and supporters. From all of our patients and staff, thank you!