

UC DAVIS
HEALTH

CHILDREN'S
HOSPITAL

2021–2022
Annual Report
HEALTHY AND
HOPEFUL FUTURES

YEAR IN REVIEW



UC Davis pediatrician Erik Fernandez y Garcia at the Sacramento Native American Health Center (SNAHC) Clinic, which partners with UC Davis Children's Hospital.





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AT A GLANCE

Select highlights from UC Davis Children's Hospital

- In 2022–23, *U.S. News & World Report* ranked UC Davis Children's Hospital among the nation's best in five pediatric specialties, including: diabetes & endocrinology, neonatology, nephrology, orthopedics, and pulmonology & lung surgery. The orthopedics ranking was awarded in collaboration with Shriners Children's Northern California, our longstanding partner in caring for children with burns, spinal cord injuries, orthopedic disorders and urological issues.
- More than 280 UC Davis Health physicians have been included on a list of the region's best doctors in the 2022 *Sacramento Magazine* "Top Docs" survey. The list demonstrates UC Davis Health's across-the-board, world-class care as physicians from 63 specialty areas, including 18 pediatric subspecialties, were recognized.
- This past year, we were re-verified as a level I trauma center and a level I pediatric trauma center by the American College of Surgeons (ACS), the world standard bearer for surgical quality. This achievement recognizes the trauma centers' dedication to transforming trauma care for optimal outcomes. We are one of only three facilities in the state with level I verification for both adult and pediatric trauma.
- UC Davis chief of fetal and pediatric surgery Shinjiro Hirose, M.D., F.A.C.S., has been appointed surgeon-in-chief of UC Davis Children's Hospital. He has served as chief of pediatric surgery, vice chair of surgery and founder and director of the UC Davis Fetal Care and Treatment Center.
- Su-Ting Li, M.D., M.P.H., vice chair of education and residency program director in the UC Davis Department of Pediatrics, has received the Robert S. Holm, M.D. Leadership Award from the Association of Pediatric Program Directors (APPD). The award honors one APPD member each year for extraordinary contributions in leadership and support of other program leaders as a mentor, advisor or role model at the organization's national level.
- Satyan Lakshminrusimha, M.D., M.B.B.S., UC Davis Children's Hospital pediatrician-in-chief, has been named Clinical Care Committee Chair of the Association of Medical School Pediatric Department Chairs (AMSPDC). The committee shares best practices and approaches to new challenges in an effort to promote access to high-quality care for all children.





UC Davis pediatric general surgeon Jonathan Kohler, M.D., M.A., provides care for a patient in the pediatric surgery clinic.

- Veronica Ahumada, director of the Technology and Social Connectedness Lab at UC Davis and the first female principal investigator of a National Robotics Initiative grant, was honored with the Early Career Award at the 2022 EDGE in Tech Initiative Athena Awards from the Expanding Diversity and Gender Equity in Tech Initiative.
- This past year, we opened a one-of-a-kind clinic dedicated to treating pediatric lipid disorders. The clinic, located in Roseville, offers care closer to home for children with abnormal cholesterol levels, elevated triglycerides and lipoprotein (a) levels, other complex lipid disorders and secondary causes of lipid abnormalities such as diabetes and kidney disease.

WELCOME

All of us at UC Davis Children’s Hospital are enormously proud that we’ve had another outstanding year, and we’re thankful for the tremendous work that our talented faculty members and care teams have accomplished. From pioneering historic clinical trials to developing new innovations for our littlest patients, our teams have kept going full steam ahead.

During this past year, we’ve had a shift in leadership and are honored to welcome UC Davis chief of fetal and pediatric surgery Shinjiro Hirose as our new surgeon-in-chief of UC Davis Children’s Hospital. Hirose has served as chief of pediatric surgery, vice chair of surgery and founder and director of the UC Davis Fetal Care and Treatment Center. He succeeds internationally renowned fetal and neonatal surgeon Diana Farmer, who is continuing as chair of the UC Davis Department of Surgery.

We’ve also drawn more national recognition in patient care, research and quality improvement initiatives. Recognition is important to our mission, but what we are most proud of is the culture of compassion woven through everything we do, and an awareness that children need the extraordinary care and comfort we continue to provide.

Here are some of the reasons our care resonates both nationally and locally. We were ranked in five pediatric specialties and among the Best Children’s Hospitals in America by *U.S. News & World Report*. Our hospital was also recognized by the National Safe Sleep Hospital Certification Program as a gold safe sleep champion, and our Comprehensive Epilepsy Program was accredited as a level 4 center — the highest designation awarded — by the National Association of Epilepsy Centers (NAEC).

In addition, our clinician-scientists have been underway developing one-of-a-kind treatments, such as the world’s first human clinical trial using stem cells to treat spina bifida before birth and a promising cellular therapy for patients with late-stage Duchenne muscular dystrophy (DMD).



This year, our partnerships with outlying and community hospitals have also continued to expand. We've partnered with the Sacramento Native American Health Center to improve access to services and pediatricians, and have kept families closer to home through telehealth services and our Regional NICU Network, which is comprised of Barton Memorial Hospital, Adventist Health Lodi Memorial Hospital, Adventist Health and Rideout, St. Joseph's Medical Center in Stockton, Mercy San Juan and Mercy Medical Center in Redding.

For referring providers and families in our 33-county, 65,000-square-mile service area, we hope these highlights and others in this report will continue to affirm the trust you place in us.

**AS ALWAYS, THANK YOU
FOR YOUR SUPPORT
AND PARTNERSHIP!**



Handwritten signature of Satyan Lakshminrusimha in black ink.

Satyan Lakshminrusimha, M.D.

Pediatrician-in-Chief, UC Davis Children's Hospital

Handwritten signature of Shinjiro Hirose in black ink.

Shinjiro Hirose, M.D., F.A.C.S.

Surgeon-in-Chief, UC Davis Children's Hospital

Handwritten signature of Brenda Chagolla in black ink.

Brenda Chagolla, Ph.D., R.N., C.N.S., FACHE

Associate Chief Nursing Officer, Patient Care Services,
UC Davis Children's Hospital



CANCER

NCI renews ‘comprehensive’ designation for cancer center

The National Cancer Institute once again recognized UC Davis Comprehensive Cancer Center as one of the nation’s most elite, renewing its “comprehensive” designation in recognition of its breadth and depth in research, care, cancer control and population sciences. The UC Davis center is one of only 51 in the nation with the designation, and is the only NCI-designated center outside of San Francisco from the Bay Area to Portland and Salt Lake City, with more than 100,000 patients visiting annually.

Changes needed in cancer care for teens and young adults

Pediatric oncologist Elysia Alvarez, M.D., M.P.H., is advocating for changes in how care is provided for adolescent and young adult (AYA) cancer patients after leading a global study that looked at the burden of cancer on AYAs. Published in *The Lancet Oncology*, the research shows that AYA patients have unique physical and emotional needs, and there are disparities to accessing treatment and outcomes in this age group. The findings shine a light on the need to develop a new approach to global cancer control from childhood to adulthood.

New guidebook to address HPV vaccine hesitancy

The UC Davis Comprehensive Cancer Center has joined the Center for Health Law and Policy Innovation of Harvard Law School to create a new resource called the HPV Vaccine Policy Landscape, Public Health Strategies. The new guidebook highlights the roles that state policy makers, educational institutions, and health care providers can play in increasing HPV vaccination rates by navigating the policy landscape more effectively.

THE CANCER CENTER IS ONE OF ONLY 51 IN THE NATION WITH THE DESIGNATION, AND IS THE ONLY NCI-DESIGNATED CENTER OUTSIDE OF SAN FRANCISCO FROM THE BAY AREA TO PORTLAND AND SALT LAKE CITY, WITH MORE THAN 100,000 PATIENTS VISITING ANNUALLY.

“The pediatric oncology team at UC Davis Children’s Hospital was nothing short of amazing as we navigated our son’s cancer diagnosis.

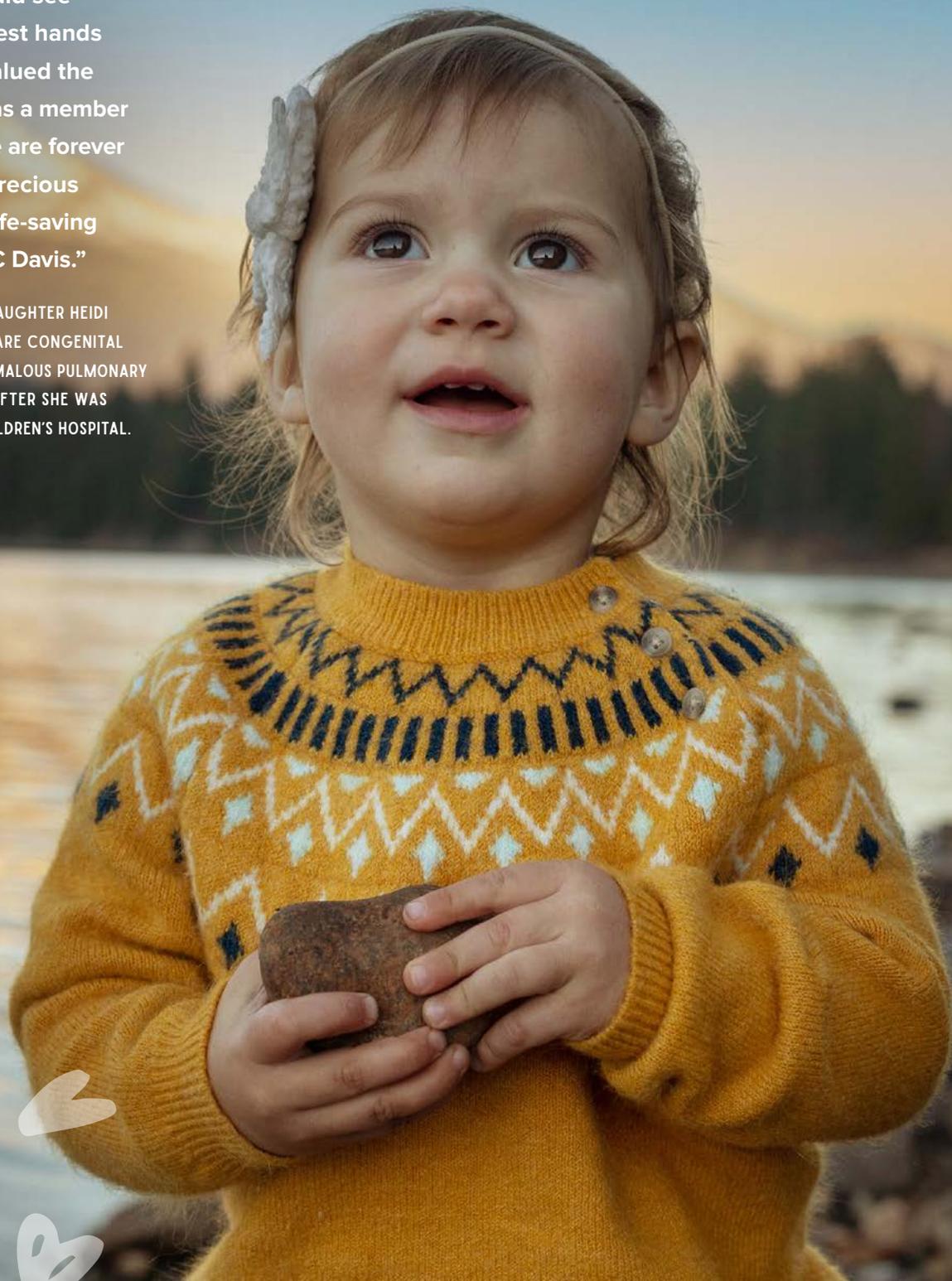
We are incredibly grateful for the care he received and for the support our whole family had throughout a very difficult process!”

KELLY HUNSUCKER, WHOSE SON NATE COMPLETED TREATMENT FOR NON-HODGKIN’S LYMPHOMA.



“Right away we could see Heidi was in the best hands and I very much valued the way I was treated as a member of Heidi’s team. We are forever grateful that our precious daughter had her life-saving TAPVR repair at UC Davis.”

CARLA CARSON, WHOSE DAUGHTER HEIDI RECEIVED CARE FOR HER RARE CONGENITAL HEART DEFECT TOTAL ANOMALOUS PULMONARY VENOUS RETURN (TAPVR) AFTER SHE WAS AIRLIFTED TO UC DAVIS CHILDREN’S HOSPITAL.



CARDIOLOGY & HEART SURGERY

Pioneering pediatric pacemaker procedure

Pediatric electrophysiologist Dan Cortez, M.D., Ph.D., is implanting the world's smallest pacemaker in patients using a minimally invasive technique, and is the leading expert for his unique procedure on children. While most traditional pacemakers are surgically implanted through the chest to the outside of the heart, and then connected by a lead, the world-first Micra leadless pacemaker was approved by the FDA in 2016. Many physicians in Northern California are trained to implant the device in adults through the leg vein; Cortez was first in Northern California to implant through the internal jugular vein.

Youth heart event screens more than 300 kids and young adults

In September, we collaborated with the Kyle J. Taylor Foundation and Project ADAM Sacramento to provide free heart screenings to more than 300 children and young adults to identify youth with undiagnosed heart conditions. Participants received a cardiac risk assessment, an EKG, a physician review and CPR training. Forty people received follow-up echocardiograms on-site and many were referred to their primary care physician or a specialist for follow-up care.

DAN CORTEZ, M.D., PH.D., IS IMPLANTING THE WORLD'S SMALLEST PACEMAKER IN PATIENTS USING A MINIMALLY INVASIVE TECHNIQUE, AND IS THE LEADING EXPERT FOR HIS UNIQUE PROCEDURE ON CHILDREN.



New pediatric lipid disorders clinic opens

A one-of-a-kind clinic dedicated to treating pediatric lipid disorders opened in Roseville this year. The clinic offers care for children with abnormal cholesterol levels, elevated triglycerides and lipoprotein (a) levels, other complex lipid disorders and secondary causes of lipid abnormalities such as diabetes and kidney disease.

DIABETES & ENDOCRINOLOGY

Nationally ranked

Our pediatric diabetes and endocrinology program ranked 47th nationally in the 2022–23 *U.S. News & World Report* Best Children’s Hospitals survey.

Improved patient experiences with telemedicine

A UC Davis Health study led by Stephanie Crossen, M.D., M.P.H., pediatric endocrinologist and Clinical and Translational Science Center scholar, found that Type 1 diabetes patients felt their experiences with video visits during the COVID-19 pandemic were as effective or more effective than in-person care. The findings, published in *Endocrines*, also showed that 82% of patients hoped to use telemedicine in the future.

New diabetic ketoacidosis guidelines

In October, the International Society for Pediatric and Adolescent Diabetes (ISPAD) released its clinical consensus guidelines on the treatment of diabetic ketoacidosis (DKA). Published in the journal of *Pediatric Diabetes*, the guide includes recommendations for fluid and electrolyte replacement, insulin therapy and monitoring for complications. Nicole Glaser, M.D., pediatric endocrinologist at UC Davis Children’s Hospital, was the lead author of the published guidelines.





“As one could imagine, there are many questions of uncertainty that come with a rare disease diagnosis. The UC Davis endocrinology team has always been supportive as we ask questions, brainstorm and navigate Ayrton’s version of panhypopituitarism. There is no one-size-fits-all answer...it’s empowering to feel included and valued in your child’s care.”

MICHAEL AND KARLIANNA THRASHER, WHOSE SON AYRTON WAS TREATED FOR PANTHYPOPITUITARISM BY THE UC DAVIS PEDIATRIC ENDOCRINE TEAM.



“The doctors, nurses, staff and everyone at the hospital took such great care of him that they really became family. We can’t thank everyone enough for all the hard work, dedication and thoughtful care.”

SALLY WELCH AND JACOB GIBSON, WHOSE SON ARTHUR WAS DIAGNOSED WITH BILIARY ATRESIA.

GASTROENTEROLOGY / GI SURGERY

Intestinal rehabilitation program expands

Our intestinal rehabilitation program, led by a comprehensive multidisciplinary GI team that is unique to the Central Valley and Northern California, has expanded to include a dedicated clinical nurse practitioner, two pediatric home health nurses, two dietitians and a social worker. The program focuses on nutrition, growth and development for short bowel syndrome and TPN-dependent children, while also providing education for parents on how to care for their kids at home after being discharged from the hospital.

Motility testing for pediatric GI patients

UC Davis Children's Hospital has added rare esophageal manometry and anorectal manometry capabilities through the expertise of Maheen Hassan, M.D. The services are helpful for diagnosis around severe but non-specific symptoms, and for decisions about medical management versus surgery.

**THE PROGRAM FOCUSES
ON NUTRITION, GROWTH AND
DEVELOPMENT FOR SHORT
BOWEL SYNDROME AND TPN-
DEPENDENT CHILDREN, WHILE
ALSO PROVIDING EDUCATION
FOR PARENTS ON HOW TO
CARE FOR THEIR KIDS AT HOME
AFTER BEING DISCHARGED
FROM THE HOSPITAL.**

MATERNITY

More than 2,000 babies delivered

In 2022, our labor and delivery team celebrated delivering more than 2,000 babies. As the Sacramento region's only nationally ranked comprehensive children's hospital, we offer extraordinary expertise for routine pregnancies and provide the highest standard of management for high-risk pregnancies, unique health concerns, complications, and unexpected situations.

Baby-Friendly Hospital designation

We earned the highly prestigious Baby-Friendly designation by Baby-Friendly USA, demonstrating adherence to the highest standards of breastfeeding care built on evidence-based practices recommended by the World Health Organization and the United Nations International Children's Emergency Fund.

Gold safe sleep champion

UC Davis Children's Hospital was recognized by the National Safe Sleep Hospital Certification Program as a gold safe sleep champion for its commitment to best practices and education on infant safe sleep. The National Safe Sleep Hospital Certification Program was created by Cribs for Kids®, the only national infant safe sleep organization.

New device to prevent unnecessary C-sections

UC Davis electrical and computer engineering professor Soheil Ghiasi's lab has built a specialized transabdominal fetal pulse oximeter (TFO) device to measure a baby's blood oxygen saturation levels non-invasively. The new oximeter was tested on a small group of patients in 2021 in collaboration with Herman Hedriana, M.D., director of Maternal-Fetal Medicine at UC Davis Health. The evaluation of TFO for use in prenatal testing is an important step towards its integration into hospitals worldwide for fetal monitoring during labor and delivery.

Study of diverse pregnant women finds increase in chemical exposure

A national 12-year study, which included co-authors from UC Davis Health, found rising exposure to chemicals from plastics and pesticides that may be harmful to development. The results, published in *Environmental Science & Technology*, found higher exposures for non-white women, those with lower educational attainment, or who were single or had been exposed to tobacco. As a result, our experts continue to educate how to limit chemical exposures, especially when it comes to food, personal care products and controlling household pests.



“From the attending physicians — including pediatrician Tammy Woo — residents and ultrasound technicians to the administrators and phlebotomists, our team was extremely friendly, attentive and supportive of this first-time mother and brand-new baby.”

EMILY LILLYA, ON THE EXPERT CARE SHE RECEIVED AFTER HER BABY WAS IN THE BREECH POSITION AND SHE WAS SCHEDULED FOR A MANDATORY C-SECTION.



Photo courtesy of
Lala Photography Sacramento

“You could tell how much the whole staff believed in Nova and Nylah. The doctors, the nurses, the fellows and residents — even the cleaning crew. All of them were cheering for us. It was like family. We felt so at home.”

DONDRE BARNES, ON HIS TWIN DAUGHTERS' CARE AFTER THEY WERE TRANSFERRED TO OUR LEVEL IV NICU AFTER BEING BORN AT 23 WEEKS.

NEONATOLOGY

Level IV NICU

The UC Davis Neonatal Intensive Care Unit (NICU) is a level IV-designated nursery (the highest possible rating) for the Sacramento region, providing clinical care for infants throughout Northern California and conducting research on health problems facing infants, including those who are born very prematurely, are extremely ill, or require surgery.

Human milk analyzer machine for premature babies

Thanks to our Miris human milk analyzer machine funded by Children's Miracle Network Hospitals (CMN), preemies in our NICU can now receive customized breast milk fortified with the nutrients they need to support their growth and wellness.

FamilyLink improves pumping experience

A recent UC Davis Health study published in *Breastfeeding Medicine* found that parents who used FamilyLink, our videoconferencing program that allows off-site families to see their babies in the NICU 24 hours a day, felt more connected to their child and had an improved pumping experience while expressing milk for their premature infants.

NICU gold-level Beacon Award for Excellence

Our Neonatal Intensive Care Unit (NICU) received a gold-level Beacon Award for Excellence from the American Association of Critical-Care Nurses (AACN). We are the only NICU in Northern California and second in the state to receive this honor. The Beacon Award for Excellence — a significant milestone on the path to exceptional patient care and healthy work environments — recognizes care-givers who successfully improve patient outcomes and align practices with AACN's six Healthy Work Environment Standards. These standards are skilled communication, true collaboration, effective decision-making, appropriate staffing, meaningful recognition and authentic leadership.

Nationally ranked

Our neonatology program ranked 29th nationally in the 2022–23 *U.S. News & World Report* Best Children's Hospitals survey.

**OUR NICU IS THE 12TH IN THE U.S.
TO RECEIVE A GOLD-LEVEL BEACON
AWARD FOR EXCELLENCE.**

NEPHROLOGY & KIDNEY TRANSPLANTATION

Nationally ranked

Our pediatric nephrology program ranked 19th nationally in the 2022–23 *U.S. News & World Report* Best Children’s Hospitals survey.

Kidney transplant patients fare better from live donor

In one of the largest studies of its kind, UC Davis researchers looked at 12,089 children who received a kidney transplant during the 20-year study period, and found that patients have better long-term outcomes when their kidney comes from living, biologically unrelated donors compared to deceased donors.

Long-term outcomes with infant kidney transplants

A new UC Davis study published in the journal *Transplantation Direct* demonstrates that infants with advanced chronic kidney disease — one of the most vulnerable of all patients — have much to benefit from receiving kidney transplants during infancy and can do so safely and with excellent long-term outcomes, in an experienced transplant center. In addition, if kidney transplants take place earlier, the adverse effects of waste buildup due to kidney failure can be avoided.

Unique dialysis service provides bridge to transplant

To better serve children waiting for a kidney, our program continues to be the region’s only outpatient peritoneal dialysis service for patients under 10 years of age.

OUR NATIONALLY RANKED PROGRAM CONTINUES TO BE THE REGION’S ONLY OUTPATIENT PERITONEAL DIALYSIS SERVICE FOR PATIENTS UNDER 10.

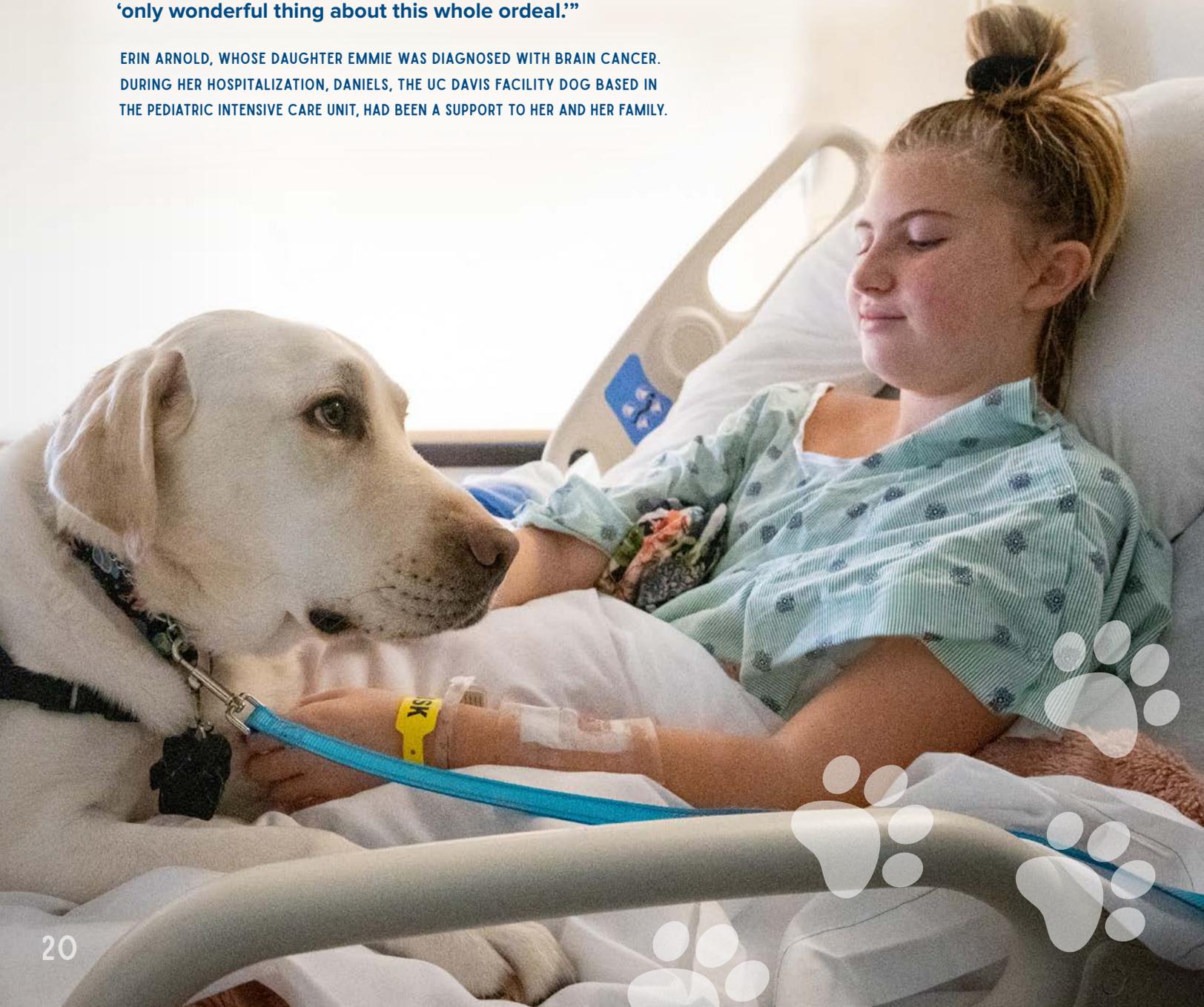


“From day one, Dr. Butani has been the calm in the crazy storm. Even at Braylin’s worst, I was at peace because of Dr. Butani’s calm demeanor and incredible knowledge. He continues to show dedication and commitment to his patients. We are so thankful for UC Davis Children’s Hospital’s nephrology team and all they have done for us, including being a part of saving Braylin’s life!”

MEGAN MCMULLEN, ON DAUGHTER BRAYLIN’S CARE AFTER SHE HAD KIDNEY FAILURE AND SUCCESSFULLY RECEIVED A KIDNEY TRANSPLANT.

“To see your teenager fearful and in pain, away from her home and disconnected from her future, receive comfort has been a source of infinite gratitude for us. Emmie calls Daniels her best boy. He was laying with her up until the moments before her brain surgery, which we are convinced directly affected her positive outcome and recovery. We will forever hold Daniels dear in our hearts as her ‘only wonderful thing about this whole ordeal.’”

ERIN ARNOLD, WHOSE DAUGHTER EMMIE WAS DIAGNOSED WITH BRAIN CANCER. DURING HER HOSPITALIZATION, DANIELS, THE UC DAVIS FACILITY DOG BASED IN THE PEDIATRIC INTENSIVE CARE UNIT, HAD BEEN A SUPPORT TO HER AND HER FAMILY.



NEUROLOGY & NEUROSURGERY

Comprehensive Epilepsy Program receives highest national accreditation rating

Our Comprehensive Epilepsy Program has been accredited as a level 4 center for adult and pediatric epilepsy, the highest designation awarded, by the National Association of Epilepsy Centers (NAEC). The program is a leader in the surgical management of refractory epilepsy, with a wide array of services that includes a new 11-bed monitoring unit scheduled to open at the end of the year. As a level 4 center, the program provides more complex forms of intensive neurodiagnostic monitoring, as well as more extensive medical neuropsychological and psychosocial treatment. Level 4 centers also offer complete evaluation for epilepsy surgery and a broad range of surgical procedures, such as minimally invasive laser surgery and devices such as responsive neurostimulation, deep brain stimulation and vagal nerve stimulation.

**LEADERS IN QUALITY
PATIENT CARE AND
INNOVATORS IN RESEARCH.**

Brooks-Kayal named Gabor Presidential Chair

Department of Neurology Chair Amy Brooks-Kayal, M.D., F.A.A.N., F.A.N.A., F.A.E.S., has been inducted as inaugural holder of the Andrew John Gabor, M.D., Ph.D. Presidential Chair. Brooks-Kayal is an internationally recognized neurologist, epilepsy expert, and research leader on novel seizure therapies, who has served as president of the American Epilepsy Society and held other national roles.

New gene causing severe neurodevelopmental delays

An international team of researchers led by UC Davis geneticists has discovered a new gene implicated in a neurodevelopmental condition called DPH5-related diphthamide-deficiency syndrome. The syndrome is caused by DPH5 gene variants that may lead to embryonic death or profound neurodevelopmental delays. UC Davis led the project with collaborations from Germany, Saudi Arabia, Sweden, Massachusetts and California, with findings published in *Genetics in Medicine*.

ORTHOPAEDICS

Cellular therapy improves signs, symptoms of Duchenne muscular dystrophy

A clinical trial at UC Davis Health and six other sites showed that cellular therapy offers promise for patients with late-stage Duchenne muscular dystrophy (DMD), a rare progressive genetic disorder that mostly affects boys. The therapy has shown to be safe and effective in stopping the deterioration of upper limb and heart functions. It is the first treatment to lead to meaningful functional improvements in the most severe cases of DMD patients.

THE AWARD BOOSTS THE DEPARTMENTS' CAPACITY TO TRAIN AND EDUCATE THE NEXT GENERATION OF SCIENTISTS IN MUSCULOSKELETAL RESEARCH.

Training the next generation of scientists in musculoskeletal research

The Departments of Orthopaedic Surgery and Biomedical Engineering received the prestigious National Institutes of Health T32 training program grant. The award boosts the departments' capacity to train and educate the next generation of scientists in musculoskeletal research. The UC Davis joint project is called MUsculoSkeletal Clinical Learning Experience (MUSCLE) and will provide students with broad investigational experience in biomechanics, tissue engineering and regeneration of connective tissues, and translational/ applied research.

Nationally ranked

U.S. News & World Report ranked our pediatric orthopedic program 19th nationally in 2022–23, in collaboration with Shriners Children's Northern California, our long-standing partner on orthopedic disorders and spinal injuries.

L-R: Lisa Mualchin, Julia Pasterski, Gavin Pereira, Brendan Kiernan, Cindy Anderson and Melissa Wulff



**“Everything was finely tuned. Everyone knew their role.
We had planned for every possible outcome in surgery.”**

**GAVIN PEREIRA, M.D., F.R.C.S. (ENG), F.A.A.O.S., WHO LED THE SURGICAL
TEAM WHO PERFORMED HIP REPLACEMENT SURGERY FOR THE FIRST TIME
ON A 16-YEAR-OLD PATIENT WITH SPINAL MUSCULAR ATROPHY.**

PULMONOLOGY

New dedicated pediatric pulmonary hypertension program

UC Davis Health has launched a pediatric pulmonary hypertension outpatient clinic that provides a one-stop shop experience for patient and family, allowing them to see multiple physicians, a respiratory therapist, registered dietitian and a social worker all within a single visit. Specialists from pediatric cardiology, neonatology, pediatric critical care, pediatric cardiothoracic surgery, pediatric pulmonology and pharmacy are all part of the collaborative pulmonary hypertension team.

Telemedicine and in-person visits best fit for asthma care

A combination of telemedicine and in-person visits is the best fit for asthma care in pediatric patients, a UC Davis Health study found. Published in the *Journal of Asthma*, the findings showed that although video visits were beneficial in reducing travel time and keeping children safe during the pandemic, parents and patients still found value to in-person visits, particularly when meeting care providers for the first time and receiving asthma education or medication management information.

Nationally ranked

Our pediatric pulmonology program ranked 35th nationally in the 2022–23 *U.S. News & World Report* Best Children's Hospitals survey.

**SPECIALISTS FROM
PEDIATRIC CARDIOLOGY,
NEONATOLOGY, PEDIATRIC
CRITICAL CARE, PEDIATRIC
CARDIOTHORACIC SURGERY,
PEDIATRIC PULMONOLOGY
AND PHARMACY ARE ALL
PART OF THE COLLABORATIVE
PULMONARY HYPERTENSION TEAM.**





“They didn’t just care for my daughter. They took care of me and Everly’s dad. They’re a big part of Everly’s success and our confidence as parents. We are so grateful to this team for everything they have done for her and for us.”

BRIANNE JACOBSEN, ON HER DAUGHTER EVERLY’S PULMONARY CARE AFTER SHE WAS TREATED FOR OMPHALOCELE, A CONDITION WHERE THE INTERNAL ORGANS STICK OUT OF THE ABDOMEN.



Historic CuRe Trial underway

Last spring Diana Farmer, M.D., F.A.C.S., F.R.C.S., internationally renowned fetal and neonatal surgeon and chair of UC Davis Health's Department of Surgery, in collaboration with stem cell scientist Aijun Wang, launched the world's first human clinical trial using stem cells to treat spina bifida before birth. Thirty-five babies will receive this one-of-a-kind fetal treatment through the CuRe Trial (Cellular Therapy for In Utero Repair of Myelomeningocele) at our Fetal Care and Treatment Center. The team anticipates seeing improvements for those born with the most severe form of spina bifida, myelomeningocele, with the ultimate hope of helping them boost motor function and walk independently.

See more in a four-part video series at ucdavis.health/cure-trial.

SURGERY

Level I Children’s Surgery Center

UC Davis Children’s Hospital is verified as a level I Children’s Surgery Center by the American College of Surgeons (ACS), the world standard bearer for surgical quality. Level I centers have children’s surgeons in every discipline, with pediatric anesthesiologists and dedicated operating rooms for children available 24 hours a day. They also train future leaders in education and research and participate in community outreach.

Group behind conjoined twins separation receives DAISY Team Award

Due to their teamwork, dedication, and successful separation of conjoined craniopagus twins, the multi-disciplinary team of more than 30 experts —under the lead of pediatric neurosurgeon Michael Edwards, M.D., chief of plastic surgery Granger Wong, M.D., D.M.D., and director of pediatric anesthesiology Rajvinder Dhamrait, B.M., B.Sc (Hons), D.C.H., F.C.A.R.C.S.I., F.R.C.A. — has earned this honorable award. In October 2020, after months of high-tech preparation, Abigail and Micaela Bachinskiy were finally separated and able to live independent lives.

Farmer is American Surgical Association president

UC Davis Department of Surgery Distinguished Professor and Chair Diana Farmer, M.D., F.A.C.S., F.R.C.S., was sworn in as president of the American Surgical Association (ASA) in April. Farmer is the first surgical leader from UC Davis Health named to the position, and the third woman elected president in the ASA’s 142-year history.

Farmer receives national award for work on spina bifida

Diana Farmer is one of 11 recipients of the 2022 Harrington Scholar-Innovator Awards, given by the Harrington Discovery Institute at University Hospitals of Cleveland. The awards support a diverse set of drug discovery projects and include grants of at least \$100,000, with the opportunity to qualify for up to \$1.1 million. Farmer’s spina bifida research has produced a unique “patch” engineered from placental mesenchymal stem cells, applied to a baby’s exposed spinal cord during an in-utero surgery. Farmer’s award will support further development of this technology for adult acquired spinal cord injury.

UC DAVIS CHILDREN’S HOSPITAL IS VERIFIED AS A LEVEL I CHILDREN’S SURGERY CENTER BY THE AMERICAN COLLEGE OF SURGEONS.

TELEMEDICINE

Expanded partnership improves pediatric trauma care

A partnership with Barton Memorial Hospital has created a Virtual Pediatric Trauma Center (VPTC), a telehealth platform utilized when patients are being considered for transfer to our level I Pediatric Trauma Center. The program allows greater communication with patients and their families, and facilitates communication between medical teams. It also allows physicians to virtually view or share patient medical imaging, which can reduce the need for extra radiation, and allows them to discuss treatment plans before the patient is transferred. Barton currently works with UC Davis Children's Hospital to ensure that at-risk newborns have access to UC Davis Health specialists and experts, including guidance from a neonatologist and neonatal specialists within the pharmacy, respiratory therapy, and nutrition departments.

AS ONE OF THE NATION'S LEADERS IN TELEHEALTH, WE'RE IMPROVING AND ADVANCING CARE IN RURAL COMMUNITIES.

Virtual programs earn Telehealth Equity Catalyst Award

UC Davis Health received a Telehealth Equity Catalyst Award from the Association of American Medical Colleges for our efforts to advance health care equity and telehealth. Jennifer Rosenthal, M.D., M.A.S., associate professor of pediatrics, and collaborators Kristin Hoffman, M.D., and Daniel Stein were recognized for their innovation of UC Davis Health's NICU Virtual Family-Centered Rounds (FCR) program and the integration of video translation services into the telehealth platform known as Extended Care.

Telehealth leader a Fulbright Scholar

James Marcin, M.D., M.P.H., director of the UC Davis Center for Health and Technology, vice chair for pediatric clinical research and professor of pediatrics, has been selected as a Fulbright U.S. Scholar for 2022–23. Marcin will work with the Royal College of Surgeons in Ireland (RCSI) and Children's Health Ireland (CHI) to advance pediatric health care in Ireland as a new children's hospital integrates novel telehealth and digital health technologies. Marcin has extensive experience collaborating with other telehealth programs internationally, and currently directs the largest pediatric tele-emergency network in the U.S.



James Marcin, M.D., M.P.H., uses telemedicine technology to provide care for a patient.



“All of the surgeons have been amazing and so open to all of my questions. They have always been honest about what they were going to do during the procedures, what my recovery was going to look like and how painful it would be. They never tried to soften the blow and sugarcoat things. I felt very informed.”

15-YEAR-OLD ER PATIENT BASSEM MANSOUR, ON HIS TREATMENT AND CARE AT UC DAVIS CHILDREN'S HOSPITAL AFTER HE WAS HIT BY A PICKUP TRUCK, WHILE BIKING.

TRAUMA & EMERGENCY

Re-verified as a level I adult and pediatric trauma center

This past year, we were re-verified as a level I trauma center and a level I pediatric trauma center by the American College of Surgeons (ACS), the world standard bearer for surgical quality. This achievement recognizes the trauma centers' dedication to transforming trauma care for optimal outcomes. We are one of only three facilities in the state with level I verification for both adult and pediatric trauma.

Identifying risks for long COVID in children

A new international study conducted in eight countries and published in *JAMA Network Open* offers a clearer picture of the risks associated with long COVID in children. The study included 1,884 children with COVID-19 who had 90-day follow-up visits. Long COVID was found in nearly 10% of hospitalized children and 5% in children discharged from the emergency department, with the most reported persistent symptoms being fatigue or weakness, cough, difficulty breathing or shortness of breath. The findings can inform public health policy decisions regarding COVID-19 mitigation strategies for children and screening approaches for long COVID among those with severe infections.

Kuppermann receives prestigious mentor award

Nathan Kuppermann, M.D., M.P.H., chair of the Department of Emergency Medicine, has received the Maureen Andrew Mentor Award from the Society for Pediatric Research. The national award honors one academic pediatrician who has an outstanding record of mentorship and leadership. Nationally, he has helped create numerous mentoring programs including the Pediatric Emergency Medicine Collaborative Research Committee (PEM CRC) of the American Academy of Pediatrics, the Pediatric Emergency Care Applied Research Network (PECARN) and the Clinical Research on Emergency Services and Treatments Network (CREST) of Kaiser Permanente.

**HOME TO THE ONLY LEVEL I
TRAUMA CENTER FOR BOTH
ADULTS AND CHILDREN IN
INLAND NORTHERN CALIFORNIA.**

UROLOGY

New procedure for bladder augmentation surgeries

In addition to serving a busy surgical practice, our clinicians are also evaluating quality-of-life issues, outcomes data and topics in minimally invasive surgery. Our pediatric urology program is a national leader in research that studies stem cells and tissue engineering to improve treatments for children with urological disorders.

Recently Eric Kurzrock, M.D., F.A.A.P., chief of pediatric urologic surgery, and his team devised a new implant procedure to create graft tissues with functioning blood vessels needed in bladder augmentation surgeries. The new innovative method published in the *Journal of Tissue Engineering and Regenerative Medicine* solves a common problem in bioengineered graft implants.

An unstoppable partnership

Combining the resources of Shriners Children's Northern California — our longstanding partner on urological issues — we provide comprehensive care and treat a wide range of conditions, including hypospadias, vesico-ureteral reflux, neurogenic bladder and more.

OUR PEDIATRIC UROLOGY PROGRAM IS A NATIONAL LEADER IN RESEARCH THAT STUDIES STEM CELLS AND TISSUE ENGINEERING TO IMPROVE TREATMENTS FOR CHILDREN WITH UROLOGICAL DISORDERS.



**“Hands down, every step
of the way, I knew I could
trust Dr. Kurzrock. He
did a lot of research and
consulted other experts
before doing anything.
He was so methodical.”**

TAMI AMES, ON DAUGHTER ZOEY'S
CARE AFTER SHE WAS BORN WITH HER
URETERS ATTACHED TO HER URETHRA.



A nurse uses ultrasound equipment to better see a child's veins when placing an IV, minimizing needle placement attempts.

NURSING

Nation's highest recognition for nursing excellence

UC Davis Medical Center has long been identified as a U.S. center of nursing excellence devoted to optimal, collaborative and evidence-based care. We are privileged to have been granted Magnet® recognition status by the American Nurses Credentialing Center. Only about 8 percent of hospitals in the nation carry Magnet® designation, and UC Davis Medical Center is currently the only medical center in Sacramento to have earned the recognition.

Community classrooms served by Operation Backpack

Pediatric nurses collected and donated a total of 129 backpacks filled with school supplies during the 14th year of Operation Backpack. The program aims to help ensure that all children are prepared for school in order to improve their chances for success.

DAISY Foundation honors nurse

Emergency Department nurse manager Frances Noriega, R.N., M.S.N., C.C.R.N., was the award recipient of a 2022 DAISY Award for exemplifying the nursing values of extraordinary compassion, courage and integrity in every situation. During the pandemic, she empowered staff to identify and implement solutions; provided ongoing frontline communication; arranged recognition events; supported our goal to obtain Emergency Department Geriatric certification; and helped earn the national Lantern Designation by the Emergency Nursing Association.

UC DAVIS MEDICAL CENTER IS CURRENTLY THE ONLY MEDICAL CENTER IN SACRAMENTO TO HAVE EARNED MAGNET® RECOGNITION.

COMMUNITY OUTREACH

Perfect partnerships

As a proud partner with the Sacramento Native American Health Center, we're improving access to services and pediatricians in the community while offering a valuable learning environment to medical students and residents. The health center is committed to enhancing quality of life by providing a culturally competent, holistic, and patient-centered continuum of care.

We're also keeping families closer to home by supporting rural areas through telehealth and our Regional NICU Network, which is comprised of Barton Memorial Hospital, Adventist Health Lodi Memorial Hospital, Adventist Health and Rideout, St. Joseph's Medical Center in Stockton, Mercy San Juan and Mercy Medical Center in Redding.

PACES webinars continue to help community hospitals

The Pediatric Acute Care Education Sessions (PACES) program offers free peer-to-peer virtual webinars and roundtable discussions to support clinicians caring for pediatric patients at rural community hospitals. The sessions provide education and clinical guidelines for a wide range of topics, such as treatment of pediatric patients with diabetic ketoacidosis, head trauma, Brief Resolved Unexplained Event (BRUE), COVID-19 and more.

Induction into Child Passenger Safety Hall of Fame

Cathy Morris, community health program supervisor with the UC Davis Trauma Prevention and Outreach Program, was recently inducted into the Child Passenger Safety Hall of Fame by the Manufacturers Alliance for Child Passenger Safety (MACPS). She was one of 10 honorees to be added to the Hall of Fame, which recognizes those who have contributed to child passenger safety locally or nationally each year.

Public education through media outreach

The innovative UC Davis Children's Hospital Media and Child Health Education Program provides training and opportunities for pediatric residents to gain media experience and educate the public about important child health issues. This year, residents:

- published 2 editorials/letters to the editor
- made 7 print/TV/internet/radio appearances as content experts
- appeared in 7 UC Davis Health stories
- and discussed child health topics on 3 podcasts.

OUR PARTNERSHIPS PRIORITIZE THE SIGNIFICANT HEALTH NEEDS OF FAMILIES THROUGHOUT OUR REGION.



EVERY YEAR, WE PARTICIPATE IN, PARTNER WITH OR SPONSOR OVER 200 COMMUNITY EVENTS AND PROGRAMS.

Helping vulnerable communities, close to home

The UC Davis Health Trauma Prevention and Outreach Program leads initiatives to reduce injury among children in Sacramento's underserved Oak Park area — such as our Wraparound program to steer youths away from cycles of violence. Another partnership supports car seat distribution and education for families on public assistance.

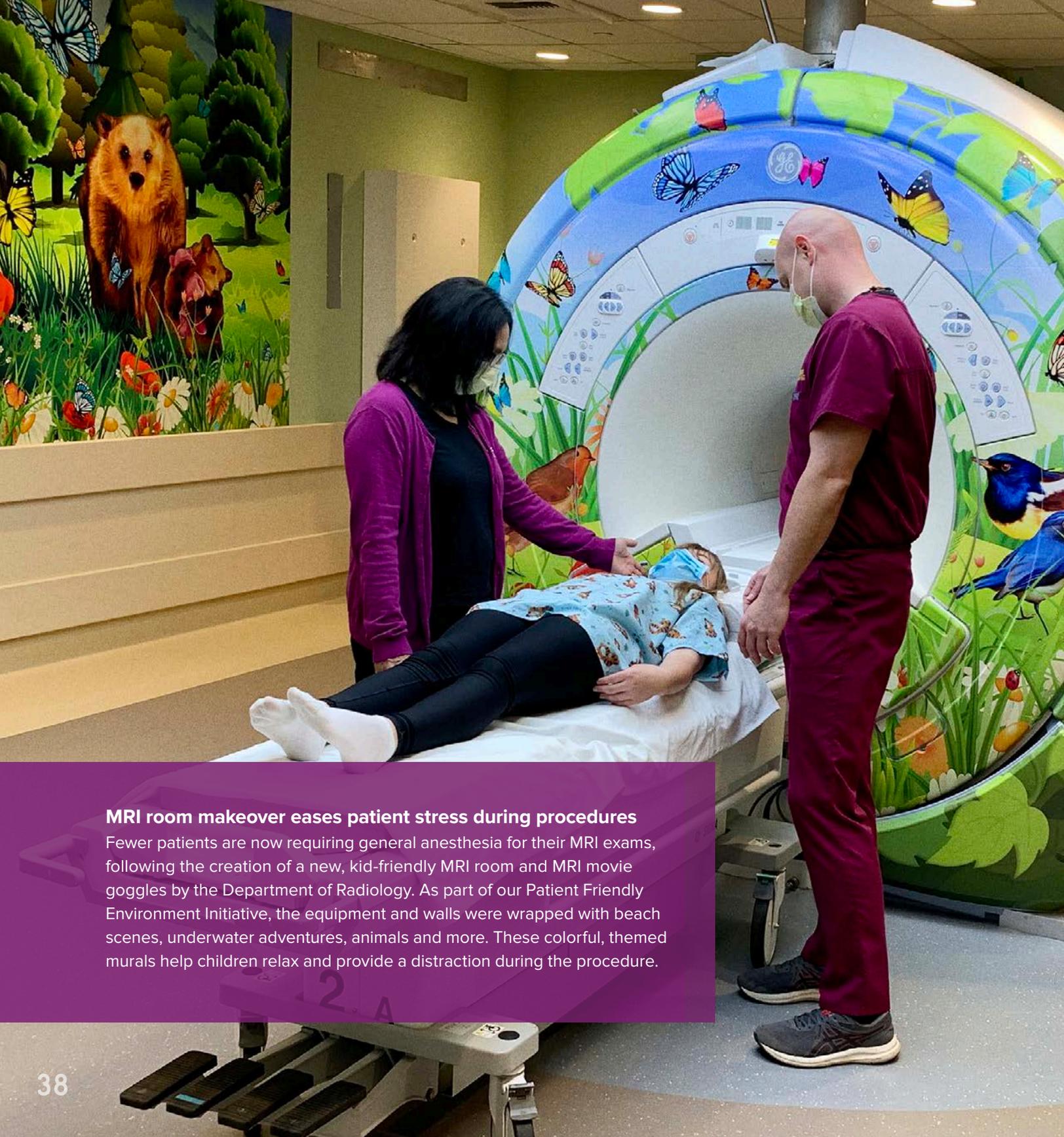
Supporting community wellness

We're partners with several wellness-related community organizations and events, including the Sacramento Running Association's California International Marathon (CIM), UC Davis Athletics, and the California Storm Women's Premier Soccer League Club.

Popular players with Republic FC

UC Davis Health is a founding and ongoing season-presenting partner of the Republic FC, and serves as the official medical provider for the club's players. UC Davis Health's kit (jersey) sponsorship of the team helps to emphasize, model and normalize health and outdoor activity for area youth. The partnership also creates opportunities for players to interact with patients during special visits to our children's hospital.





MRI room makeover eases patient stress during procedures

Fewer patients are now requiring general anesthesia for their MRI exams, following the creation of a new, kid-friendly MRI room and MRI movie goggles by the Department of Radiology. As part of our Patient Friendly Environment Initiative, the equipment and walls were wrapped with beach scenes, underwater adventures, animals and more. These colorful, themed murals help children relax and provide a distraction during the procedure.

PATIENT-CENTERED CARE

Minimizing the trauma and anxiety of hospitalization

Our Child Life and Creative Arts Therapy Department and compassionate staff work hard to minimize trauma and anxiety for our patients and allow them to continue typical growth and development. This year we continued to offer a wide variety of support services and activities.

Comfort Commitment assists with painful pediatric procedures

In 2021, we launched a new Comfort Commitment Initiative which provides a standardized approach to help patients better cope with distressing procedures and decrease pain and anxiety. Thanks to Children's Miracle Network Hospitals (CMN), we are consistently able to provide support, a calming environment and empower children to customize a plan that uniquely meets their specific needs.

STEPS team expands into perinatal palliative care

The Supportive Therapies and Enhanced Palliative Services (STEPS) team at UC Davis Children's Hospital has improved the quality of life for patients with acute or chronic life-limiting illnesses and their families. The specialized interdisciplinary team recently expanded to cover perinatal palliative care services for pregnant women whose fetuses have congenital anomalies and focuses on helping to prevent, reduce and soothe symptoms associated with illness.

Playroom reopens

This year, we've welcomed our first patient back into our pediatric playroom since March 2020. Our playroom is staffed by Child Life and Creative Arts Therapy staff. The playroom offers jigsaw puzzles, arts and crafts, toys, books and more.

AS PART OF OUR PATIENT FRIENDLY ENVIRONMENT INITIATIVE, THE EQUIPMENT AND WALLS WERE WRAPPED WITH BEACH SCENES, UNDERWATER ADVENTURES, ANIMALS AND MORE.

PHILANTHROPIC SUPPORT

Employee honored with national fundraising award

Michelle Thompson, UC Davis assistant director of development, was honored with the Victoria Enmon Award at Children's Hospitals Week last April, the national Children's Miracle Network Hospitals conference. The Victoria Enmon Award recognizes the efforts of program directors across the country to support the Extra Life program, a fundraising program that encourages the public to play video games to raise money for local Children's Miracle Network Hospitals. Thompson was recognized for increasing fundraising, communications, local incentives, education and engagement for Extra Life.

Virtual Toy Drive raises over \$21,000

Every hospitalized child at UC Davis Children's Hospital were provided free toys for the holidays in 2021. Additional funds were used to provide toys, art and music supplies, treasure box prizes and giveaways during hospitalizations as well as visits to the Comprehensive Cancer Center and MIND Institute. Children who celebrated their birthday in the hospital also received gifts, thanks to the generosity of donors.

Nurse practitioners raise funds for Make-A-Wish kids

Last May, UC Davis Pediatric Heart Center nurse practitioners Barb Goebel, Mary Zanobini and Callie Brecek participated in the Trailblaze Challenge, a 23.2-mile hike along the Tahoe Rim Trail, to raise funds for the Make-A-Wish Northeastern and Central California and Northern Nevada chapter. The team raised over \$17,500 and granted life-changing experiences for UC Davis pediatric patients.

NorCal AIDS Ride raises \$3,000 for UC Davis Pediatric Infectious Diseases

The Division of Infectious Diseases at UC Davis Children's Hospital is once again a beneficiary of the NorCal AIDS Cycle, an event where participants ride 38 miles, 62 miles or 100 miles to raise money and awareness for HIV/AIDS service providers in the Sacramento Valley and beyond.

FOURTEEN GRANTS TOTALING \$383,029 HAVE BEEN AWARDED BY CHILDREN'S MIRACLE NETWORK AT UC DAVIS IN 2022.



AVERY

Children's Miracle Network Hospitals Child Champion

UC Davis Children's Hospital is a proud member of the Children's Miracle Network Hospitals (CMN), an international nonprofit dedicated to raising funds for, and awareness of, children's hospitals. Donations create miracles by funding medical care, research, equipment and programs that save and improve the lives of our children including this year's local Children's Miracle Network child champion Avery Cunha.

Avery was 19 months old when she fell into a pool and nearly drowned. She was transported via helicopter to UC Davis Children's Hospital where she spent months in the Pediatric and Cardiac Intensive Care Unit (PICU/PCICU) and comprehensive rehabilitation. Now 5 years old, Avery has been able to live a full life. Every year, 170 Children's Miracle Network Hospitals identify a "champion" in each of their communities to serve as the face for children treated at their local children's hospital.

CMN awards 14 new clinical, research grants

Fourteen grants totaling \$383,029 have been awarded by Children's Miracle Network at UC Davis in 2022 to clinicians and researchers at UC Davis Children's Hospital. Eleven grants will enhance the clinical care of children, while three grants were awarded for research directly improving the health and welfare of children.



BY THE

The Central Valley's only **level I** pediatric trauma center, with **99,310** clinic visits, **7,268** hospital admissions and **16,760** emergency department visits this year.



NUMBERS



The West Coast's first level I children's surgery center as verified by the American College of Surgeons, with 5,290 children's surgeries this year.



NATIONALLY RANKED IN 5 SPECIALTIES: diabetes & endocrinology, neonatology, nephrology, orthopedics and pulmonology & lung surgery.



Provides care for children in **33 counties**, covering **65,000-square-miles**, with over **2,573 transfers** accepted from referring institutions.



PHYSICIANS ACROSS more than 30 subspecialties (the region's greatest diversity of pediatric subspecialties).



DESIGNATED Children's hospital beds

- Neonatal Intensive Care Unit (NICU) – **49**
- Pediatric and Cardiac Intensive Care Unit (PICU) – **24**
- General Pediatrics – **48**
- Pediatric Emergency Department – **13**
- Children's Surgery Center – **7** operating rooms, **1** procedure room, **24** pre-op/post-op beds



850 members of our all-R.N. nursing staff have been trained to **CARE FOR CHILDREN**

- **Granted Magnet®** recognition status by the American Nurses Credentialing Center
- **91.9%** of UC Davis nurses hold a B.S.N. degree or higher
- **21%** hold advanced degrees
- **Over 60%** of UC Davis nurses have obtained a specialty certification through the American Nurses Credentialing Center



OUR MISSION

UC Davis Children's Hospital is committed to ensuring the health and well-being of children by promoting wellness through patient care, education, research and community service and by providing a regionally and nationally recognized center for innovative children's health care, making available the very best care possible.

children.ucdavis.edu





children.ucdavis.edu



UC DAVIS CHILDREN'S HOSPITAL CONTACT INFORMATION

Referrals/Transfers 800-UCD-4-KIDS (800-823-4543)

Clinical Telehealth Program 877-430-5332

Regional Affiliations and Outreach 916-734-0558 or 916-734-0750

Continuing Medical Education 916-734-5352

Center for Professional Practice of Nursing 916-734-9790

Giving and Donations 916-734-9400

24-Hour Hospital Operator 916-734-2011