

# 2015 Annual Report



UCSF Benioff Children's Hospital  
Oakland

# 2015 Leadership

## SENIOR LEADERSHIP

**Bertram H. Lubin, MD**  
*President & Chief Executive Officer*

**Richard DeCarlo, RN, BSN, MBA**  
*Executive Vice President &  
Chief of Hospital Operations*

**David Durand, MD**  
*Senior Vice President &  
Chief Medical Officer*

**Robert Fries**  
*Chief Financial Officer*

**Lisa Ozaeta, DrPH, JD, MBA**  
*Senior Vice President &  
Chief Strategy Officer*

**Janet King, PhD**  
*Interim Senior Vice President,  
Research & Executive Director,  
Children's Hospital Oakland  
Research Institute*

**Mary Jane Perna**  
*Interim Senior Vice President &  
Chief Development Officer*

**Nancy Shibata, RN, MSN**  
*Senior Vice President, Operations  
& Chief Nursing Officer*

**Carolyn G. Dossa, CPMSM, MBPA**  
*Vice President, Institutional Quality  
& Family Support Services*

**Susan Flanagan, BS, MN, MS**  
*Interim Vice President,  
Ambulatory Services*

**Robert Odom**  
*Vice President, Marketing*

**Rajnish Prasad, MBA**  
*Vice President, Research  
Operations, Children's Hospital  
Oakland Research Institute*

**Susan Ryan**  
*Interim Vice President,  
Ancillary Services*

**Phyllis Weiss**  
*Interim Vice President,  
Human Resources*

## BOARD OF DIRECTORS

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Lynne Benioff

Jeffrey Cheung

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Bertram Lubin, MD

Edward Penhoet, PhD

Shahan Soghikian

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## MEDICAL STAFF LEADERSHIP

James Feusner, MD  
*President*

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*President Elect*

Hitendra Patel, MBBS, MRCP  
*Immediate Past President*

Margery Lackman, MD  
*Secretary Treasurer*



## LETTER FROM THE PRESIDENT

In 1912, a group of civic-minded women founded the “Baby Hospital,” an independent, freestanding pediatric hospital. These women believed that every child—regardless of financial circumstances—deserved quality health care. In 2014, a formal affiliation with the University of California, San Francisco renamed the hospital UCSF Benioff Children’s Hospital Oakland. This relationship has created new opportunities for patient

care, education, research, strategic development, community involvement, and advocacy. Our combined efforts have strengthened our physician foundation and electronic medical record system and allowed us to break ground on our Master Plan, an ambitious 10-year effort to renovate existing facilities and build new ones. The project will provide space to expand the range of our pediatric services and to maximize quality health care for children.

In support of our 104-year-old mission, the Center for Community Health and Engagement was established in 2015. The Center works to align community needs with health care resources. The Center is positioned to be a national leader in addressing the social determinants of health and to develop a new standard of care for children that focuses on health promotion, prevention, child development, wellness, and equity. The hospital and the Center have positive working relationships with the City of Oakland and our surrounding counties—which demonstrates our commitment to better the health and well-being of our community.

Our basic, clinical, and translational research programs improve the care we provide to children and their families. Personalized medicine, genomic diagnostics, and even gene therapy reflect our commitment to primary, secondary, tertiary, and quaternary care for children. Our research program is strengthened further by our collaborations with the UC Berkeley schools of Engineering and Public Health, as well as the Department of Molecular & Cell Biology.

We are extremely proud of our residency and fellowship programs, which train our future physicians and clinical scientists who will advance the care for children in our community, in our nation, and throughout the world.

UCSF Benioff Children’s Hospital Oakland is your hospital. Thank you for joining our efforts to improve the lives of children in the Bay Area and beyond.

Sincerely,

**Bertram H. Lubin, MD**  
President & CEO

# Oakland City Council Approves Plan to Modernize UCSF Benioff Children's Hospital Oakland

UCSF Benioff Children's Hospital Oakland achieved a major milestone in May 2014 when the Oakland City Council unanimously approved the certification of the Environmental Impact Report for the hospital's Master Plan. The project will rebuild and modernize the hospital to meet seismic regulations and improve facilities for children, adolescents, and their families.

The hospital's Master Plan will add 20 new inpatient beds, for a total of 210 beds; create individual patient rooms; expand the outpatient center; improve the intensive care units; add new surgical, diagnostic, and treatment rooms; and support services and clinics to help ensure the best hospital experience for patients and families.

Over a period of two years, Children's hosted more than 30 community meetings to ensure that the hospital's neighbors had input on the modernization plan. Children's addressed and used the feedback to develop a plan that would minimize disruption to the surrounding community. The hospital will continue to communicate with neighbors as the project proceeds—over the next 10 years.

Construction on the modernization project began in fall 2015.

“We have been gratified by the process of working with our neighbors, community leaders, and families to create the most ideal construction plan. This project means our facilities will soon match the remarkable patient care UCSF Benioff Oakland provides. We deeply appreciate all those who have helped to make this possible.”

—Richard DeCarlo, Executive Vice President & Chief of Hospital Operations, UCSF Benioff Children's Hospital Oakland

TOTAL NEW PATIENTS

37,444

TOTAL INPATIENT  
ADMISSIONS

10,815



TOTAL NEW  
CANCER PATIENTS

116



Phase 1: Estimated completion in 2017.

INPATIENT DIAGNOSTIC  
IMAGING/LAB-  
REFERRED VISITS

**16,946**



INPATIENT SURGERY CASES  
(Main Hospital)

**3,413**

TOTAL SURGICAL CASES  
(Inpatient and Outpatient)

**8,303**

# Top Bay Area Pediatric Institutions Form Partnership to Advance Children's Health

UCSF Benioff Children's Hospital San Francisco (UCSF Benioff SF) and UCSF Benioff Children's Hospital Oakland (UCSF Benioff Oakland) affiliated in 2014, building on the hospitals' mutual commitment to provide outstanding care to children in local communities, as well as advance medical discovery and treatment for the world.

The affiliation brings together two leading children's hospitals, strengthening their abilities to provide outstanding care to all children. The partnership is designed to provide better health care value to consumers through higher-quality care, lower costs, and more coordinated access to services at hospital locations on both sides of the Bay, as well as medical facilities throughout Northern California.

Patients and families can now access more than 800 pediatricians and pediatric specialists delivering specialized care daily at UCSF Benioff Children's Hospitals, as well as hundreds of community-based pediatricians affiliated with the two hospitals. The two hospitals jointly offer more than 65 different pediatric medical specialties and subspecialties, including primary care, transplant, sickle cell services, orthopaedics, neurology, cardiology, thalassemia, pediatric rehabilitation, asthma, and diabetes care.

"The synergies created by these two respected institutions coming together allows children and families to benefit from greater depth and breadth of pediatric expertise as well as innovation that is possible by working together," said Bertram Lubin, MD, President & CEO of UCSF Benioff Children's Hospital Oakland.

While UCSF Benioff Oakland remains separately licensed with an independently governed board of directors, the hospitals share best practices for the delivery of the highest-quality pediatric care and collective commitment to eliminating health disparities and expanding our mental health services. Together, the hospitals are among the top 10 children's health care providers in the country.

UCSF Benioff SF and UCSF Benioff Oakland have worked together for decades, but the formal affiliation and UCSF Benioff brand paves the way for the next generation of discoveries and expertise in pediatric care.

## **UCSF BENIOFF CHILDREN'S HOSPITALS' 2015 MEDICAL SERVICE ACCOMPLISHMENTS**

- » Growing hospital partnerships with Marin General Hospital, Santa Rosa Memorial, Washington Hospital, Community Regional Medical Centers, Community Hospital of the Monterey Peninsula, Eden Medical Center, ValleyCare, and Natividad.
- » A growing physician practice network: recruitment of 31 physician groups in San Francisco, 6 in Redwood City, and 1 in San Leandro.
- » Partnership with Physicians Choice Medical Group at two urgent care centers (San Francisco and Oakland).



## **TRANSFORMATIVE GIFT TO STRENGTHEN CHILDREN'S HEALTH CARE ACROSS THE BAY AREA**

In April 2014, Lynne and Marc Benioff donated \$100 million to UCSF Children's Hospitals—divided equally between Oakland and San Francisco.

The gift is strengthening the existing talent and programs in basic and clinical research and patient care at the two premier institutions, as well as attracting new expertise to accelerate the development of innovative solutions for children's health on both sides of the San Francisco Bay and globally.

"We have been deeply inspired by the incredible kids, doctors, researchers, and administrators at UCSF Benioff Children's Hospitals," said Lynne and Marc Benioff. "We feel extremely fortunate to have this opportunity to support the best children's hospitals in the world."

In recognition of this gift and the affiliation, Children's Hospital Oakland was renamed UCSF Benioff Children's Hospital Oakland, and UCSF Benioff Children's Hospital was renamed UCSF Benioff Children's Hospital San Francisco. Together, the hospitals are UCSF Benioff Children's Hospitals.

Both institutions, along with UCSF Medical Center, care for all children who seek help, regardless of their family's ability to pay, and provide millions of dollars' worth of uncompensated care and community services for low-income, homeless, and underinsured patients.

"We are thrilled to advance our vision of improving the health of the children in Oakland and San Francisco, and to fuel positive changes in the care of our youngest patients today and for future generations," said Sam Hawgood, MBBS, Chancellor of UCSF and a neonatologist. "This gift significantly strengthens the abilities of both institutions to attract and retain top talent in pediatric health, as well as to support the next evolution of research and clinical programs."

"We have been deeply inspired by the incredible kids, doctors, researchers, and administrators at UCSF Benioff Children's Hospitals. We feel extremely fortunate to have this opportunity to support the best children's hospitals in the world."

—Lynne and Marc Benioff

# National Recognition from U.S. News & World Report

UCSF Benioff Children's Hospitals in Oakland and San Francisco are among the nation's premier children's hospitals in nine pediatric specialties, according to the 2015–2016 U.S. Best Children's Hospitals rankings conducted by the U.S. News Media Group.

UCSF Benioff Children's Hospitals earned their highest rankings in diabetes and endocrinology, nephrology, cancer, neurology and neurosurgery, neonatology, and gastroenterology and GI surgery. They are the best in the Bay Area in five specialties: diabetes and endocrinology, cancer, neurology and neurosurgery, gastroenterology and GI surgery, and urology.

This is the first year that UCSF Benioff Children's Hospitals were evaluated based on both locations—Oakland and San Francisco.

“U.S. News’ rankings are one more validation of our daily work to provide the best pediatric health care possible throughout Northern California. Patients now benefit from an even greater depth of expertise and innovation that comes from working together at our two campuses.”

—Mark Laret, CEO of UCSF Benioff Children's Hospitals

The majority of the U.S. News ranking score relied on patient outcomes and care-related resources. U.S. News gathered clinical data from a detailed questionnaire sent to 184 pediatric hospitals. A sixth of the score came from annual surveys of pediatric specialists and subspecialists in each specialty in 2013, 2014, and 2015. They were asked where they would send the sickest children in their specialty, setting aside considerations of location and expense.

PATIENTS FROM  
CONTRA COSTA COUNTY

22.3%

PATIENTS FROM  
ALAMEDA COUNTY

63.7%



## THE COMPLETE RANKINGS FOR UCSF BENIOFF CHILDREN'S HOSPITALS ARE:

- #8 Pediatrics: Diabetes & Endocrinology (Best in Bay Area)
- #10 Pediatrics: Nephrology
- #12 Pediatrics: Cancer (Best in Bay Area)
- #13 Pediatrics: Neurology & Neurosurgery (Best in Bay Area)
- #16 Pediatrics: Neonatology
- #18 Pediatrics: Gastroenterology & GI Surgery (Best in Bay Area)
- #19 Pediatrics: Pulmonology
- #22 Pediatrics: Urology (Best in Bay Area)
- #25 Pediatrics: Cardiology & Heart Surgery



“The excellent patient care at UCSF Benioff Children’s Hospitals is underscored by its commitment to the research that’s translated into effective treatments for our pediatric patients. We are extremely proud of our rankings, which demonstrate the value of our affiliation and the services we provide together to all children.”

—Bertram Lubin, MD, President & CEO of UCSF Benioff Children’s Hospital Oakland

TOTAL EMERGENCY ROOM VISITS

50,115



TOTAL NUMBER OF AIR TRANSPORTS

563

# New Center Focusing on Community Health, Prevention, and Outreach

This year, UCSF Benioff Children's Hospital Oakland created the Center for Community Health and Engagement (CCHE). The mission of The Center is to provide leadership in developing, coordinating, and implementing a platform for population and preventive health care for children and families served by UCSF Benioff Children's Hospital Oakland.

"We are uniquely positioned to be a national leader in demonstrating how a children's hospital can reach beyond the traditional medical model to also address the social determinants of health that contribute to the overall health and success of children," said Dr. Bertram Lubin, President and CEO of UCSF Benioff Children's Hospital Oakland.

The Center bridges pediatric health care policy with community needs. The Center serves to support UCSF Benioff Oakland's existing community benefit programs and to act as a point of contact for collaboration with community organizations and universities. The Center serves as an umbrella for five different focus areas: government affairs and public policy, community relations, training and education, grants and program development, and research.

"The idea behind The Center is to ensure that Children's maintains and grows its commitment to the ideals of health promotion, prevention, equity, and community," says Dr. Barbara Staggers, UCSF Benioff Oakland's Chief of Adolescent Medicine and Executive Director of the CCHE. "Our goal is for UCSF Benioff Oakland to become a national leader at advancing understanding of health issues in diverse, urban pediatric populations."

The Center promotes a prevention perspective and increases awareness of culturally responsive approaches in patient care. It facilitates program development, grant acquisition, and cross-sector initiatives. All of these efforts are guided by a strategic planning process that includes hospital representatives and community partners.





## FIND PROGRAM

The Family Information & Navigation Desk (FIND) Program at UCSF Benioff Children's Hospital Oakland was born out of the desire by Children's staff to move beyond a focus on biomedical and risk-behavior explanations of health to understand the root causes of health inequities and to provide a preventive approach to population health. Between 2014 and 2015, FIND staff provided services to almost 1,000 families.

FIND assists the health care staff in systematically identifying and addressing social determinants of health. FIND pairs families in need with navigators or community workers to assist them in addressing basic needs such as food security, housing stability, and physical activity, navigating the complex landscape of available public benefits, and provide follow-up. UCSF Benioff Oakland collaborates with homeless shelters, food banks, East Bay Regional Parks, school districts, community-based organizations, and a myriad of other local and regional community groups. Ultimately, FIND helps to improve our patients' overall health.

# New HEDCO Motion Analysis & Sports Performance Lab

The UCSF Benioff Children's Hospitals Walnut Creek Campus recently opened the first clinical motion analysis lab in Northern California that offers both evaluation and follow-up treatment in the lab setting. Made possible in part by a generous grant from the HEDCO Foundation, the HEDCO Motion Analysis & Sports Performance Lab is a state-of-the-art facility designed to evaluate children with movement disorders, such as cerebral palsy, as well as to analyze the movement of adolescent athletes.

The HEDCO Motion Analysis & Sports Performance Lab integrates state-of-the-art technology to critically and scientifically analyze athletic activities and develop individualized exercise and fitness programs. The program specializes in training young athletes from age 5 to 25.

"Our pediatric focus gives us unparalleled knowledge of how to care for developing young athletes and pediatric sports injuries," said Nirav Pandya, MD, director of the Sports Medicine Center for Young Athletes. "We use the latest technology, along with advancements in orthopaedic care and rehabilitation techniques that are tailored to the growing bones, joints, and muscles of young athletes."



TOTAL OUTPATIENT CLINIC VISITS  
(Brentwood, Walnut Creek, Larkspur,  
Pleasanton, and San Ramon)

**16,140**

TOTAL OUTPATIENT CLINIC VISITS,  
INCLUDING DIAGNOSTIC IMAGING/LAB

**263,585**



## NEW SPECIALTY CLINIC AT BISHOP RANCH MEDICAL CENTER IN SAN RAMON

Bishop Ranch, the largest mixed-use business community in the East Bay, signed a lease with UCSF Benioff Children's Hospital Oakland for a pediatric medical clinic with multiple specialties, including orthopaedics and sports medicine.

The San Ramon clinic offers a variety of pediatric medical care specialties in its new 5,000-square-foot facility. These specialties include behavioral pediatrics, cardiology, clinical nutrition, endocrinology/diabetes, gastroenterology, general surgery, nephrology, neurology, ophthalmology, orthopaedics, otolaryngology (ENT), and speech therapy, along with the Sports Medicine Center for Young Athletes and a concussion clinic.

This new location enables us to bring UCSF Benioff Children's Hospitals' premier specialists and services to the Danville and San Ramon area.

OUTPATIENT SURGERY CASES

1,193

TOTAL OUTPATIENT CLINIC VISITS

180,384

# Talking Is Teaching: Talk Read Sing Campaign Launches in Oakland

On July 23, 2014, former Secretary of State Hillary Clinton visited Children's Hospital Oakland Research Institute to launch a very special initiative aimed at better preparing Bay Area children for success in school and beyond. Included were representatives from business, government, education, community, and faith-based organizations who met to discuss how to close the "word gap" between children from lower- and higher-income families. The campaign is in partnership with Too Small to Fail, a joint initiative of the Opportunity Institute and the Clinton Foundation.

The campaign, titled Talking Is Teaching: Talk Read Sing, aims to close the "word gap"—an average difference of about 30 million words that children in high-income families hear from parents and caregivers by their 4th birthday, as compared to the number of words that children in low-income families hear. The fewer words children hear and learn, the more likely they are to experience an achievement gap, which persists through the preschool and kindergarten years and has a lifelong impact on brain development and overall health and well-being. Parents can close the word gap by talking, reading, and singing with their children, beginning from birth, every day.

A targeted and intensive campaign at UCSF Benioff Children's Hospital Oakland has been running since the fall of 2014 and will continue for two more years, thanks to a generous gift from Marc and Lynne Benioff. The Benioffs donated \$3.5 million to create a model program for how children's hospitals can actively address the word gap as a health issue. This program is being evaluated by Dana Hughes, DrPH, of the UCSF Philip R. Lee Institute for Health Policy Studies, and lessons learned will be used to spread the program to San Francisco and to children's hospitals around the country.

To learn more about Talking Is Teaching: Talk Read Sing, go to [www.talkreadsing.org](http://www.talkreadsing.org).





## **UCSF BENIOFF CHILDREN'S HOSPITAL OAKLAND RECEIVES PRESTIGIOUS ACS LEVEL I PEDIATRIC TRAUMA CENTER DESIGNATION**

The trauma center at UCSF Benioff Children's Hospital Oakland has been verified as a Level I Pediatric Trauma Center by the American College of Surgeons (ACS)—the highest level of certification that can be awarded. This achievement recognizes the trauma center's dedication to providing optimal care for injured patients and brings national recognition to the hospital's trauma center.

The verification of Level I pediatric trauma service now makes UCSF Benioff Children's Hospital Oakland one of only 44 ACS Level I Pediatric Trauma Centers in the country and one of only five ACS Level I Pediatric Trauma Centers in California.

## Sebastion the Miracle Kid

Sometimes survival isn't as simple as taking a pill or undergoing a procedure. Sometimes survival demands more from the patient, the family, and the care team. Sometimes it requires a fighting spirit.

Four-year-old Sebastion and his mother, Jamie, were throwing rocks over a cliff in Bodega Bay in November 2014 when the Santa Rosa boy lost his balance and fell over the edge. Jamie dove to catch him, but missed him by a few inches. Terrified, she watched him tumble down the face of the daunting 230-foot cliff.

To everyone's surprise, Sebastion was alive. Heavy fog prevented a helicopter crew from airlifting him off the beach, so he was taken by ambulance to Santa Rosa Memorial Hospital, then transferred to UCSF Benioff Children's Hospital Oakland. As one of only five ACS Level 1 pediatric trauma centers in California, we have one of the most experienced trauma teams in the Bay Area.

"When he came in, he was pretty badly injured. The most concerning thing was his head injury," said Christopher Newton, MD. Sebastion suffered shear force trauma, a type of brain injury caused by rapid acceleration or deceleration of the head. He underwent surgeries on his leg and arm, received two blood transfusions, and was put in a medically induced coma to keep him from going into shock. His recovery also has involved ongoing speech, physical, occupational, and music therapies, as well as psychiatric counseling.

Now back at home, Sebastion has come a long way since his devastating accident. There's still a long road ahead, but his family feels extremely grateful for the care that he has received.

"My son wouldn't be alive without this hospital. He wouldn't be thriving without the therapies and the team to support him."

—Jamie, Sebastion's mother

Four-year-old Sebastion working with his physical therapist, Lucy Tomlinson, DPT, at UCSF Benioff Children's Hospital Oakland.





## Caring for Kai

In just two days, the Culvers' entire world turned upside down.

Renee and Van Culver were planning a big family birthday party for their son Kai, who was about to turn 4 years old. But the day before his birthday, Kai woke up feeling nauseated. Just a typical stomach bug kids pick up all the time, Renee thought—until she felt something hard bulging from Kai's abdomen. "We called our pediatrician immediately. We kept convincing ourselves it was a hernia."

Kai's doctor knew something was terribly wrong and told the Culvers to take their son directly to UCSF Benioff Children's Hospital Oakland. Once there, a biopsy confirmed that Kai had stage 3 Burkitt lymphoma, a rare type of cancer that doubles every 24 hours. A large tumor was pressing on his internal organs, and he couldn't breathe.

"I remember one of the surgeons saying, 'We think we can keep your son alive.' They did much more than that; they gave us our precious child back."

Kai faced a long journey; in fact, he was hospitalized for 40 days, and his care required multiple specialists. "Thankfully, every single person on Kai's medical team was incredibly skilled," shares Renee. "They managed a very complex regimen of chemotherapy. They were able to repair a hole in his abdomen that was causing a serious infection. They knew how to calm down a small boy who was deathly afraid of needles and dressing changes."

Looking back, Renee and Van realize just how fortunate they were to be at UCSF Benioff Oakland, where Kai had access to some of the world's top oncology specialists. But that was only part of his care.

"Child life specialists, counselors, social workers, music and art therapists, among many others, cared for Kai's entire needs," says Van. "They work with kids who have cancer every day; they know how to distract them into happiness."

Today, Kai is in full remission, going to school, learning karate, and playing with his little sister—just being a kid.



Ronald Krauss, MD,  
Senior Scientist,  
Children's Hospital  
Oakland Research  
Institute

## Dr. Ronald Krauss Receives Multimillion-Dollar National Institutes of Health Grant

While cardiovascular disease (CVD) is generally considered an adult disease, our work on CVD can guide families to live a more consciously healthy life.

Ronald Krauss, MD, has received a five-year, \$13,184,000 grant for precision medicine research in statin response. The National Institutes of Health's National Institute of General Medical Sciences grant enables Dr. Krauss and his colleagues to apply a multidisciplinary approach to identify genetic determinants of the efficacy of statin drugs in reducing the risk of CVD as well as the risk for adverse effects of statins, specifically myopathy and type 2 diabetes. The grant has allowed Dr. Krauss and his team to create a Center for Pharmacogenomics in Precision Medicine with a research program that utilizes an innovative "systems" approach. It incorporates complementary genomic, transcriptomic, and metabolomic tools, together with studies in cellular and animal models and innovative informatics models.

Dr. Krauss and Marisa Medina, PhD, will recruit statin users who have experienced adverse outcomes—namely individuals for whom statins have not prevented a major adverse coronary event (such as a heart attack) as well as those who developed either myopathy or type 2 diabetes while on treatment. Using cell lines established from these individuals, as well as cell lines from statin users who have not had an adverse outcome while on treatment, they will identify genes and metabolites whose expression differs between cases and controls. Dr. Medina pioneered the approach of performing molecular profiling of patient-derived cells for pharmacogenomic discovery.

Statin drugs are among the most widely prescribed drugs in the Western world. While they are highly effective and generally safe, adverse effects occur. The team's ultimate goal will be to identify new biomarkers that modulate the multiple actions of statins and that can be used to guide more effective use of this widely used class of drugs.

CHILDREN'S HOSPITAL OAKLAND  
RESEARCH INSTITUTE RESEARCHERS

212

CLINICAL TRIALS  
FOR PEDIATRICS

186

RESEARCH  
VOLUNTEERS

149

DIAGNOSTIC  
INVENTIONS

23

THERAPEUTIC  
INVENTIONS

84

PATENTS  
ISSUED

11

Janet King, PhD, Interim Senior  
Vice President & Executive Director,  
Children's Hospital Oakland Research  
Institute (CHORI)

# The Importance of Zinc in Maintaining Normal Immune Function and Fighting Infection

Over one-third of the world's population consumes too little zinc. Zinc is essential for normal immune function and fighting infection, and it plays key roles in the metabolism of carbohydrate, protein, and fat within cells. Studies suggest that each cell within the body has a small zinc reserve to support critical functions when dietary zinc intake is low. The Children's Hospital Oakland Research Institute (CHORI) lab headed by Janet King, PhD, has shown that small reductions in dietary zinc increase cellular DNA damage, which is repaired when the zinc supply increases.

The prevalence of zinc deficiency worldwide is unknown. Estimated deaths among children under 5 years of age that are linked to zinc deficiency range from 100,000 to 500,000 annually. Administering additional dietary zinc to at-risk children reduced diarrhea-related deaths by 27 percent and pneumonia-related deaths by 15 to 21 percent, suggesting that insufficient zinc was playing a role in those deaths.

The Bill and Melinda Gates Foundation has recently funded a program led by Dr. King to design and implement zinc interventions focused on the first 1,000 days of a child's life (from conception to 2 years of age). The program, called the International Zinc Nutrition Consultative Group, is composed of 10 international investigators. The primary goals are to identify how and when best to initiate dietary zinc interventions and to test the efficacy of those interventions. The work will be done primarily in five target countries: India, Bangladesh, Ethiopia, Burkina Faso, and Nigeria. Additionally, CHORI labs will develop techniques for measuring zinc nutrition during the first 1,000 days of life and provide technical assistance with national surveys of zinc nutrition among lower- and middle-income countries. Eventually, CHORI staff will take the lead in scaling up the successful interventions by partnering with in-country health programs.





Mark Walters, MD, Program Director, Blood & Marrow Transplantation (BMT); Program Director, Cord Blood Program; Medical Director, Jordan Family Center for BMT & Cellular Therapies Research

## Gene Therapy Study Shows Promising Outcomes for Patients

The early results regarding gene therapy for severe beta thalassemia patients indicate that the therapy could reduce or eliminate lifelong need for blood transfusions. Beta thalassemia is a blood disorder caused by a mutation in the HBB gene, and it is characterized by a reduced production of the protein hemoglobin. Hemoglobin is the protein molecule in red blood cells that carries oxygen from the lungs to the body's tissues and returns carbon dioxide from the tissues back to the lungs. Patients with severe forms of beta thalassemia require frequent blood transfusions to replace their unhealthy blood with healthy blood. However, transfusion-related complications such as iron overload can be deadly.

Dr. Walters has been the lead researcher in a study that uses LentiGlobin BB305, a noncommunicable virus, to deliver a fully functioning HBB gene to a patient's own blood-producing stem cells.

Patients were first given high-dose chemotherapy to destroy the thalassemia-producing blood cells. Stem cells were collected from transfusion-dependent beta thalassemia major patients, and healthy genes were inserted. Then the cells were infused back into the patients.

Nine transfusion-dependent beta-thalassemia major patients received LentiGlobin BB305 therapy, and all nine patients then produced the corrected hemoglobin.

Five of these patients have HBB gene mutations that are associated with reduced production of functional hemoglobin; these five are now transfusion-free.

The other four patients have two copies of a specific type of HBB gene mutation known as beta 0 ( $\beta^0/\beta^0$ ) and appear to need a higher level of corrected hemoglobin to reliably eliminate the red blood cell transfusions. These four patients had transfusion needs reduced, but not eliminated. Their transfusion needs were reduced by at least 50 percent.

These results indicate that gene therapy is a promising option for reducing or eliminating blood transfusions and limiting long-term complications in patients with this disease.



## Fueling Her Dream

Her parents encouraged her to pursue a degree in computer science. But from early on, Amarjit Bath was more interested in cardiology than coding. The California State University, East Bay senior has spent the last two years participating in Children's Hospital Oakland Research Institute's (CHORI) Summer Research Program. This rare opportunity to work in the hospital's laboratories alongside some of the best in the field solidified Amarjit's passion for the medical profession.

Born in India, Amarjit spent most of her childhood in Dubai before moving to the United States in 2003. She recalls years of watching both her sister and mother suffer from chronic illness. Her family's limited income made health insurance out of reach.

Determined to help, Amarjit researched patient assistance programs and found ways to get the costly medications they needed free of charge. This experience has been the driving force for Amarjit to not only be the first in her family to complete college, but to continue on with medical school.

"I want to use my education to collaborate with health care professionals, advocate for my patients, and conduct research on chronic illnesses," says Amarjit. She credits her time at CHORI as a major step toward realizing that dream.

"Each year we identify underrepresented students with very high potential and provide them with a welcoming environment. In the few short weeks we have their attention, we are amazed by how they grow—not only in their understanding of the scientific method, but also in self-awareness and confidence."

—Ellen Fung, MD, co-director of the CHORI Summer Research Program

# Education

## RECRUITMENT

Our national pediatric residency program reputation has continued to grow. We have expanded our applicant pool for first-year resident positions to a total of 921, an increase of more than 10 percent for the third year in a row. For the class entering June 2015, 257 medical students from 85 different medical schools were interviewed. We matched a talented and diverse group of 26 pediatric interns to one joint Oakland–San Francisco child neurology resident and one joint Oakland–San Francisco pediatric dermatology resident. The interns are from 20 different medical schools and 19 different colleges and hail from every region of the U.S.

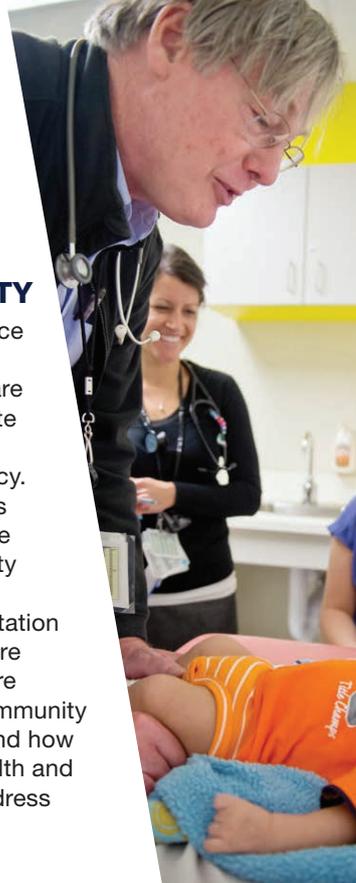
We have continued to recruit underrepresented minorities with three special diversity interview days. Our fourth-year student program also became one of the nation's most competitive programs, with 80 medical students from all over the U.S. applying for a fourth-year rotation.

## ACADEMICS AND CAREER PLACEMENT

In June 2015, we graduated our 88th class of 30 pediatric residents, plus 4 chief residents and 10 fellows. The resident graduates have accepted academic pediatric specialty fellowships, positions in primary care groups, and pediatric hospitalist roles.

## PEDIATRIC RESIDENTS WORK IN THE COMMUNITY

Our pediatric residents are in service in the community as a part of the Community, Advocacy, Primary Care or “CAP” rotation. Residents devote four to eight weeks to CAP each year of their three years of residency. They learn about their community's health care needs when helping the underserved at the Alameda County Housing Authority offices, regional centers, and WIC centers. Their rotation also includes providing medical care in clinics that serve families who are homeless or in transition. Their community work teaches our residents firsthand how social determinants can effect health and allows them the opportunity to address and mitigate the effects.



NUMBER OF  
RESIDENTS

88

SPECIALTY  
FELLOWS

11





## SCHOOL OF NURSING

UCSF Benioff Children's Hospital Oakland partners with local nursing schools to provide internships, preceptorships, and Advanced Practice Nursing (APN) placements. Students receive valuable pediatric experience, often resulting in a decision to pursue a pediatric-focused career after graduation.

In 2015, UCSF Benioff Oakland partnered with 30 schools and had 846 participating students. These students were placed in several inpatient nursing units, including 4 South, 4 Medical, 5 Surgical, 3 Surgical, 5 South, and our Neonatology Intensive Care Unit (NICU), in addition to perioperative services at both the main operating room and at Walnut Creek.

# 24

### NUMBER OF LANGUAGES SPOKEN BY OUR RESIDENTS

American Sign Language, Amharic, Arabic, Armenian, Cantonese, Farsi, French, Greek, Gujarati, Hebrew, Hindi, Hmong, Japanese, Khmer, Korean, Laotian, Mandarin, Other Chinese, Portuguese, Russian, Spanish, Tagalog, Urdu, Vietnamese



## 6TH ANNUAL NOTES & WORDS

The Notes & Words motto, "Have fun, do good," was especially fitting for this year's lineup of writers and musicians onstage to support UCSF Benioff Children's Hospital Oakland. Over 1,500 people turned out at the Paramount Theatre on April 25, 2015, for the hospital's signature event, which raised over \$575,000.



# Philanthropy—Leading the Way

Thank you for helping kids get back to doing what they do best—being kids. Our ability to change the outcome for children is integrally linked to the many individuals, companies, and foundations that have made charitable gifts to support our work and propel the hospital's ambitious Master Plan forward. Following are highlights from more than \$93 million raised for the young patients at UCSF Benioff Children's Hospital Oakland.



## CHAMPIONS HELPING CHAMPS

Showing their teamwork and determination beyond the basketball court, the Warriors Community Foundation invested in our Community Health & Adolescent Mentoring Program for Success (CHAMPS). The three-year internship program helps underrepresented minority high school students get a head start on health care careers.



## **COSTCO EMPLOYEE GIVES BACK**

After being faced with a devastating medical diagnosis, longtime Costco employee Arlie Smith made it his mission to be the top fundraiser during the company's "May Is for Miracles" Children's Miracle Network Hospitals campaign. With the support of coworkers and customers, Arlie earned the title of top fundraiser, helping to bring the company's total donation to over \$1.6 million.

## **INVESTING IN THE FUTURE OF HEALTH CARE**

As a strong partner in meeting the needs of our community, Kaiser Permanente renewed its commitment of \$5 million to help fund Phase 1 of UCSF Benioff Children's Hospital Oakland's Master Plan. Kaiser's ongoing support of Children's is an essential investment in the future of health care and the safety net that serves tens of thousands of families each year.



## **PEOPLE HELPING PEOPLE**

Bay Area credit unions, fundraising under the Credit Unions for Kids brand, have partnered with UCSF Benioff Oakland for decades. Their credo of "people helping people" is aptly illustrated with their generous support of our pioneering pediatric rehabilitation program, striving to help all kids reach their full potential.

## A RECIPE FOR HELPING KIDS

The Colonel Harland Sanders Foundation pledged a lead gift of \$1 million toward the construction of a new state-of-the-art Outpatient Pediatric Rehabilitation Center. Central to our Master Plan, the center will offer diagnostic and treatment services to infants, children, and adolescents impaired by disability, illness, or accident.



## DEDICATING TIME, TALENT, AND TREASURE

Exotic décor and entertainment surprises added mystery and fun to the Children's Health Guild's annual Spring Fundraiser & Gala on May 30, 2015, held at the Claremont Hotel in Berkeley. The Moroccan-themed event drew over 300 attendees and raised hundreds of thousands of dollars for UCSF Benioff Children's Hospital Oakland and the George Mark Children's House.

## TEEING UP FOR CHILDREN'S

Over the past two decades, the Kids-N-Need Golf Tournament has raised over \$100,000 for UCSF Benioff Children's Hospital Oakland. This annual spring event brings golfers of all skill levels together for the love of the game and the benefit of patient families that do not have the resources to pay for medical care.



## MAKING A LASTING DIFFERENCE

There are few donors who have committed more to support our mission than the Harvey L. & Maud C. Sorensen Foundation. Over the last five decades, the Foundation has granted more than \$6 million to UCSF Benioff Children's Hospital Oakland in support of the health and well-being of tens of thousands of children.



## SUPPORTING A THRIVING COMMUNITY

Recognizing UCSF Benioff Oakland as an important resource for their family and the community at large, Mike and Rebecca Ghielmetti, through Signature Development Group, committed to a multiyear sponsorship of our premier fundraising event, Notes & Words. The Piedmont parents have also donated their time, serving on the hospital's Campaign Steering Committee and Children's Health Council.

## ADDRESSING POVERTY AS A CHILDHOOD DISEASE

Heeding the call to address poverty as a serious threat to children's health, UCSF Benioff Oakland President and CEO Bertram Lubin, MD, and his wife, Vivian Scharlach, made a generous gift to initiate a new Center for Community Health and Engagement. The Center will help to ensure that UCSF Benioff Oakland maintains and grows its commitment to the ideals of health promotion, prevention, equity, and community.



**STATEMENT OF OPERATIONS\***

As of June 30, 2015, and December 31, 2014 (\$ in thousands)

<b>REVENUE</b>	<b>FY 2015</b>	2014
Net patient service	<b>\$ 506,736</b>	\$ 422,386
Fundraising, investments, and other	<b>93,713</b>	86,235
<b>Total Revenue</b>	<b>\$ 600,449</b>	\$ 508,621
<b>EXPENSES</b>	<b>FY 2015</b>	2014
Salaries and benefits	<b>\$ 282,497</b>	\$ 272,535
Research and specific purpose	<b>53,361</b>	51,171
Professional fees	<b>36,970</b>	37,797
Supplies and services	<b>85,450</b>	82,356
Depreciation and interest	<b>34,947</b>	34,370
Hospital quality assurance fee	<b>18,886</b>	20,380
Other	<b>32,210</b>	21,404
<b>Total Expenses</b>	<b>\$ 544,321</b>	\$ 520,013
<b>Net Gain/(Loss)</b>	<b>\$ 56,128</b>	\$ (11,392)

\*Includes consolidated financial information for UCSF Benioff Children's Hospital Oakland, Children's Hospital Oakland Research Institute, and UCSF Benioff Children's Hospitals Foundation.



**BALANCE SHEET\***

As of June 30, 2015, and December 31, 2014 (\$ in thousands)

<b>ASSETS</b>	<b>FY 2015</b>	2014
Cash and cash equivalents	<b>\$ 24,150</b>	\$ 66,205
Investments	<b>273,055</b>	198,588
Patient accounts receivable, net	<b>69,320</b>	61,912
Property and equipment, net	<b>268,149</b>	275,436
Other assets	<b>124,126</b>	98,247
<b>Total Assets</b>	<b>\$ 758,800</b>	\$ 700,388
<b>LIABILITIES AND NET ASSETS</b>	<b>FY 2015</b>	2014
Current liabilities	<b>\$ 13,553</b>	\$ 12,505
Long-term liabilities	<b>213,710</b>	202,005
<b>Total Liabilities</b>	<b>\$ 227,263</b>	\$ 214,510
<b>Net Assets</b>	<b>\$ 531,537</b>	\$ 485,878
<b>Total Liabilities and Net Assets</b>	<b>\$ 758,800</b>	\$ 700,388

\*Includes consolidated financial information for UCSF Benioff Children's Hospital Oakland, Children's Hospital Oakland Research Institute, and UCSF Benioff Children's Hospitals Foundation.

## SOURCES OF REVENUE

Medi-Cal/California Children's Services/ Medicare/Supplemental funds (DSH, hospital quality assurance fee, etc.)	<b>56%</b>
Other insurance, private insurance (contract and commercial), and self-pay	<b>29%</b>
Research program revenue	<b>8%</b>
County contracts	<b>2%</b>
Philanthropy	<b>4%</b>
Other	<b>1%</b>
<b>Total</b>	<b>100%</b>

## HOW WE USE OUR FUNDS

Patient care	<b>57%</b>
Research and education	<b>12%</b>
Facility expenses	<b>12%</b>
General and administrative	<b>18%</b>
Fundraising	<b>1%</b>
<b>Total</b>	<b>100%</b>







**UCSF Benioff Children's Hospital**  
Oakland

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