

The



of Pediatric Care

The University of Utah Department of Pediatrics



# Remembering Dr. Edward B. Clark (1944-2022)



In the spring of 1995, Dr. Edward B. Clark came to Salt Lake City to explore the position of chair of the Department of Pediatrics and chief medical officer at Primary Children's Hospital. Over the next 26 years, he made an impact on the future of children's health that few others have achieved.

A mentor and a teacher, Dr. Clark advocated a collaborative approach to research, a commitment to providing equal opportunities in health care and education, dedication to genetics and genomic medicine, and steadfast support of treating children with even the most complex conditions.

*This book is dedicated to Dr. Clark and all of the outstanding professionals who have shaped the Department of Pediatrics and made a difference in the lives of children.*





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# Message from Our Chair

The Department of Pediatrics has been dedicated to improving children’s health since our start in 1943. Over the years, we’ve embraced our academic mission with an eye toward responding to what Robert Haggerty, MD, coined as the “old and new morbidities.”

Spanning primary care to highly subspecialized programs ranging from infectious diseases to mental health issues, the department has evolved our educational, research, clinical, and community engagement offerings to meet the changing needs of children and their families.

Anchored by our enduring strong affiliation with Inter-mountain Primary Children’s Hospital, we’ve expanded our residency and fellowship programs, strengthened our research initiatives, built up our Clinical Enterprise, and attracted top faculty that has helped us move the field forward, both on a regional and national scale.

In response to the needs of the children we serve, we’ve added new specialty divisions including the Divisions of Behavioral Health, Palliative Care, and Complex Care. Programming that focuses on health care transitions are being added to help children—especially those with chronic conditions—gain skills at managing their own health care as they enter young adulthood. We’re addressing the needs of diverse young people by providing clinical services specifically for transgender youth and those who are refugees. We’re training tomorrow’s physicians through the innovative X+Y curriculum and residencies that focus on community care. We’re providing more inclusive research and leadership opportunities for women and underrepresented minorities. And we’re making advancements in genetics and personalized medicine to give children and their families new hope, treatments, and a chance for a brighter future.

All of this has been made possible by leaders in the field, including Dr. Edward Bowersox Clark, who brought the department from its adolescence to a highly productive adulthood. Dr. Clark epitomized an academic physician who had a vision to make full use of all the resources available at Primary Children’s Hospital, connected to the academic expertise of the faculty at the University of Utah. He was instrumental in attracting promising faculty to build their careers here. His legacy lives on in the many programs he encouraged and supported, and in the advancements these talented faculty continue to make.

We’re devoted to making a difference in all the areas of pediatrics that we touch. We’ve recruited bright, talented faculty—more than half of whom are women. We’re committed to advancing the role of women in the field. And we encourage those who join our department to pursue the issues they feel called to work on so that we can continue to improve the health and well-being of children for generations to come.

**Angelo Giardino, MD, PhD**  
Chair, Department of Pediatrics

# Our Mission and Vision

- **Our mission**  
Improving the lives of children through excellence in education, research, clinical care, and advocacy.
- **Our vision**  
Caring for children, caring for their future.

“**The beauty of medicine are those connections and relationships you have with patients and families—seeing many conditions get clarified and even leading to treatment. And the joy of discovery.**”

**John Carey, MD, MPH**, emeritus professor, former chair of the Division of Medical Genetics, and founder of the Medical Genetics Fellowship program

## Department of Pediatrics Highlights (as of Spring 2022)

**585**  
**Faculty**  
(324 primary, 261 adjunct)

**92**  
**Residents**

**65**  
**Subspecialty Fellows**

**2**  
**Post-Doctoral Fellows**

**31**  
**Advanced Practice Clinicians**

**\$44.7M**  
**Research Expenditures (FY20)**

**#16**  
**Dept. Funding Rank (NIH)**



# A New Era in Pediatrics

In the fall of 1943, with only two full-time faculty, the Department of Pediatrics at the University of Utah was born. At 35 years old, John A. Anderson, MD, PhD, who came from the University of Minnesota Department of Pediatrics, served as professor and chair of the department. He appointed Dr. Robert H. Alway, MD—also from the University of Minnesota Hospitals—as his sole fellow instructor.

From these humble beginnings, the department has grown to become the second largest in the Spencer Fox Eccles School of Medicine (SFESOM) at the University of Utah with 22 divisions, and one of the largest pediatric departments in the country. Pioneers like Dr. M. Eugene Lahey, Dr. George Veasy, Dr. Lucy Osborn, and countless others fueled this growth.

**“At that time, the most striking professors at the University of Utah were in pediatrics: Dr. Anderson, a wise reserve to a brilliant person. And Dr. Alway, an outgoing, dynamic individual. As a team, they were outstanding. And many in our class became interested in pediatrics because of them.”**

Joseph Newton, MD, Class of 1946



## Laying the Foundation for Growth

**M. Eugene Lahey, MD**, chair of the Department of Pediatrics in 1958, played an integral role in its growth. He developed a formal program that actively recruited faculty members and was instrumental in striking an agreement between the university and Primary Children’s Hospital. His vision was to create ties between the hospital and the university that would help strengthen the department’s research, clinical, and education missions—a vision that would transform both institutions and children’s health care in the Mountain West region years later.



## Strengthening Collaborative Ties

In 1968, Dr. Lahey appointed the first full-time faculty member at Primary Children’s Hospital: **L. George Veasy, MD**. A University of Utah Medical School graduate and the first board certified pediatric cardiologist in the Mountain West, Dr. Veasy became director of Pediatrics Education and Research. Eventually, he would coordinate the move of PCMC to the university campus in 1990, a milestone that opened new opportunities for growth, including attracting more candidates to the university faculty on a wider national scale.

*\*Primary Children’s Hospital changed its name to Primary Children’s Medical Center in 1974, and then back to Primary Children’s Hospital in 2013.*

By 2022, the department stood more than 320 faculty strong. More than half are women—the greatest number of tenured and adjunct female faculty in the Spencer Fox Eccles School of Medicine (SFESOM) at the University of Utah. The department has also made strides in recruiting more Asian, Latino, and Black faculty over the years, resulting in a rich pool of diverse thoughts and perspectives.

Our Faculty  
Fast Facts



The Department of Pediatrics is above the SFESOM average for women faculty.



Pediatrics has more Asian faculty than the entire state of Utah, percentage wise.



Pediatrics has more Latino faculty than the SFESOM, percentage wise.



25% of the Black male faculty in the SFESOM are employed by pediatrics.



The Native American Summer Research Internship (NARI) program, hosted within pediatrics, has produced 20 Native American medical students, one of which is at our institution now.

Department of  
Pediatrics Chairs



Dr. John Anderson  
(1943-1949)



Dr. James Bosma  
(1949-1959)



Dr. Eugene Lahey  
(1959-1972)



Dr. Richard Hebertson  
(acting, 1968-1970)



Dr. Lowell Glasgow  
(1974-1982)



Dr. Richard Siegler  
(acting, 1982-1983)



Dr. Lucy Osborn and Dr. Richard Molteni  
(acting co-chairs, Jan 1991-July 1991)



Dr. Mike Simmons  
(1983-1994)



Dr. J. Michael Dean  
(interim, 1994-1996)



Dr. Edward Bowersox Clark  
(1996-2018)



Dr. Angelo Giardino  
(2018-Present)



## Women in Pediatrics: Taking Their Place, Making an Impact

In 1944, the department was made up of nine faculty members. Dr. Sophia Alway, a clinical instructor in pediatrics who also managed the well-baby clinic, was the first and only woman on the faculty at that time. While men dominated medicine in those early days, several key women over the years made the Department of Pediatrics what it is today.

**“I’ve always appreciated my colleagues—particularly my male colleagues—for the kindness and gentleness I found in pediatrics. However, I believe that there are still huge gender disparities in the profession. Women have a real place in broadening the field to be much more aware of the importance of families, community, and resources.”**

**Lucy Osborn, MD**, former co-chair and vice chair of the Department of Pediatrics, professor emeritus, General Pediatrics, Ross Education Award for Outstanding Contribution to Medical Education, former associate vice president for Health Sciences Clinical Programs



^ **Sophia Alway, AB, MD**, was the first woman to join the Department of Pediatrics faculty as a clinical instructor in 1944.



^ “I went to medical school in the 1970s. There were very few women in my class—about five total. It was just before the explosion of more women entering medicine. A small group of us paved the way back then.”

**Linda Book, MD**, professor of pediatrics, former chief of the Division of Pediatric Gastroenterology



^ When **Lucy Osborn, MD**, came to the University of Utah in 1974 for her pediatric residency, there was only one woman on the faculty. Almost 10 years later, she was appointed the first female vice chair and later co-chair of the department.



Under the leadership of Dr. Clark, who became chair of the Department of Pediatrics in 1996 and Dr. Angelo Giardino, appointed chair in 2018, more women were appointed into leadership positions.

“**Dr. Clark realized how much women have to contribute to pediatrics and he decided to embrace that and create opportunities for women.**”

**Carrie Byington, MD**, professor emeritus, former vice chair for Research, former health sciences associate vice president for Faculty and Academic Affairs, executive vice president of University of California Health



## 2007

When Dr. Clark named Dr. Carrie Byington as vice chair for research in 2007, she noticed “there were a lot of raised eyebrows.” Frequently the only woman in leadership meetings, and the only Latina in the room, Dr. Byington went on to become one of the leaders in faculty support for the Research Enterprise of the department, establishing the Pediatric Clinical and Translational Scholar Program (PCAT) program, which was then adopted by the entire Spencer Fox Eccles School of Medicine and Health Sciences (VPCAT), and ultimately, the entire university. After leaving the University of Utah, Dr. Byington became the Senior Vice President of the Texas A&M University Health Science Center, the Vice Chancellor for Health Services, and the Dean of the College of Medicine. In 2019, she was appointed as the Executive Vice President of the University of California Health System.

**“Because pediatrics is such a woman-dominated specialty, I think the department was instrumental in making the University of Utah more inclusive for women and underrepresented minorities.”**

**Carrie Byington, MD**, professor emeritus, former vice chair for Research, former health sciences associate vice president for Faculty and Academic Affairs, executive vice president of University of California Health



## 2007

In 2007, Dr. Clark named Dr. Wendy Hobson-Rohrer as the Associate Program Director of the Pediatric Residency Program. With the mentorship and support of Dr. Clark and other department leaders, Dr. Hobson-Rohrer established the Academy of Pediatric Education and Leadership (APEL), adapted it to become the Academy of Medical Science Educators, and is now the Academy of Health Sciences Educators (AHSE). In 2019, Dr. Hobson-Rohrer was appointed by Dr. Michael Good as the first Associate Vice President for Health Sciences Education.

**“Whenever I had an idea, Dr. Clark, and now Dr. Giardino, have been there to discuss the visions and how to get there. By supporting women in pediatrics, their impact has extended throughout health sciences, as more and more women (and pediatricians) take on leadership roles.”**

**Wendy L. Hobson-Rohrer, MD, MSPH, FAAP**, associate vice president for Health Sciences Education, associate dean for Faculty Development, executive clinical director South Main Clinic, professor of pediatrics



## 2010

In 2010, Dr. Clark appointed Dr. Karen Buchi as Chief of the Division of General Pediatrics, and as the Medical Director for Ambulatory Services in 2016. Dr. Buchi was appointed vice chair of the Department of Pediatrics by Dr. Angelo Giardino in 2019.

**“After my rotation in pediatrics as a third-year medical student, I knew that I wanted to spend my career with this peer group. The leaders of this department during my career here—Dr. Simmons, Dr. Dean, Dr. Clark, and now Dr. Giardino, have steadily created a culture where women can thrive.”**

**Karen Buchi, MD**, professor, vice chair of pediatrics, and former chief of the Division of General Pediatrics



## 2015

Dr. Jennifer Plumb, a professor in the Division of Emergency Medicine, with Dr. Clark’s support, established the Utah Naloxone Program in 2015. It is Utah’s first and only statewide naloxone program. With additional support and guidance from Dr. Clark and Dr. Giardino, Andy’s Utah Naloxone Wellness Center opened in 2019 focusing on prevention and clinical care serving people who use drugs.

**“Utah has gone from 4th in the nation for overdose deaths to 38th with the expansion of these groundbreaking and lifesaving efforts. We’re showing people we care about them and want to support and value them.”**

**Jennifer Plumb, MD, MPH**, professor in the Division of Emergency Medicine, and founder of the Utah Naloxone Program

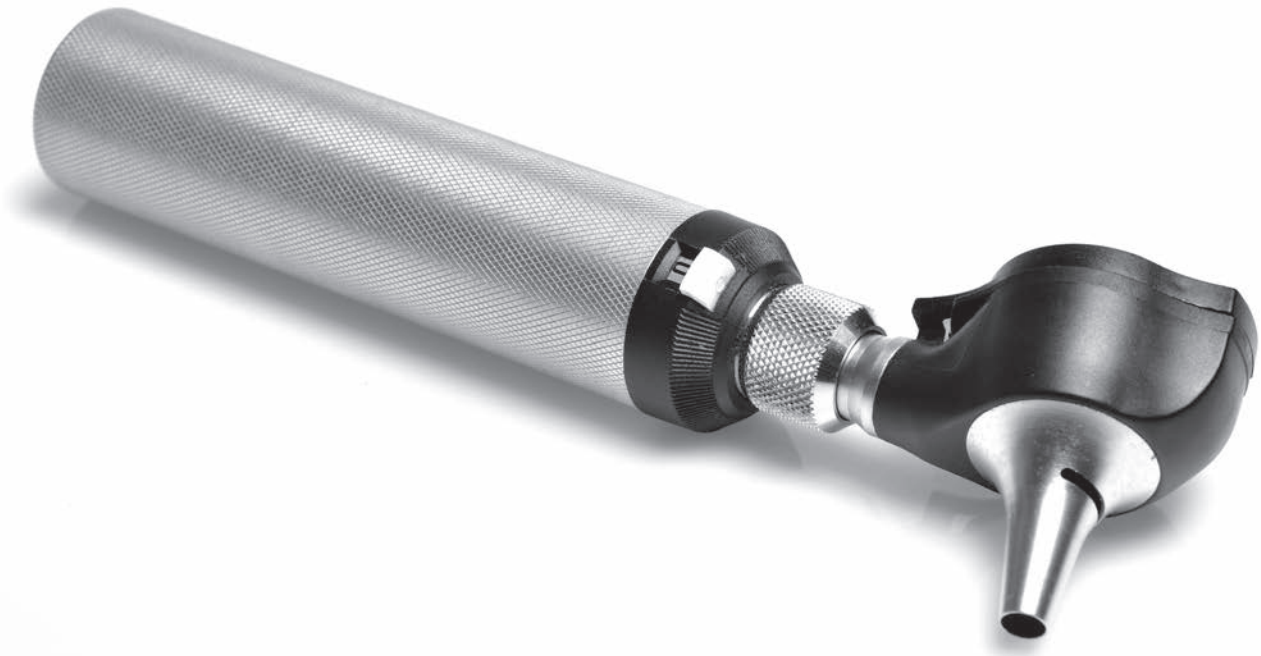


# Partnering for Better Patient Outcomes

It's not every day that two major medical institutions come together to seamlessly complement one another and revolutionize care, but that's exactly what Intermountain Primary Children's Hospital and the Spencer Fox Eccles School of Medicine at the University of Utah did when they forged a formal affiliation.

**“The ultimate objective of the relationship was to bring these health systems together to collaborate around achieving the best pediatric outcomes for the state. The university brings the physician and research expertise to the table. Intermountain brings the facility, equipment, capital investment, and personnel that support the Clinical Enterprise.”**

**Katy Welkie**, vice president of children's health and CEO Primary Children's Hospital at Intermountain Healthcare



“

At the University of Utah, I discovered an extraordinary blend of community with a deep commitment to children and families in an environment of academic curiosity and rigor, and a culture of collegiality and collaboration. I've had the privilege and honor to work with four generations of children's health professionals from the university and Intermountain in this integrated team we call **Barney Purple**—a combination of **Utah Red** and **Intermountain Blue**.

We have excellence in operations, a thriving site of innovation, and an extraordinary place to develop and translate new information. For this opportunity to work with all of you, I'm deeply and profoundly grateful.”

**Edward Bowersox Clark, MD**  
Chair, Department of Pediatrics, 1996–2017



▲ This plaque stands at the entry of Primary Children's Hospital



# A Hospital Gets a New Home

In 1983, Dr. Michael Simmons left his “beloved” Johns Hopkins University and came to the University of Utah, inspired by the possibility of rooting a children’s hospital on the university campus. Around the country, he’d seen the collaborative opportunities that open up when a strong children’s hospital partners with an academic institution, and he wanted to be a part of it.

➤ Working with leaders from both institutions, Dr. Simmons was integral to the 1985 decision to move Primary Children’s Hospital next to University Hospital. From left-to-right: George Veasy, MD, Thales Smith, MD, Chase Peterson, MD, Michael Simmons, MD, Dave Jeppson, Scott Parker, Bill Jones



**“The move of Primary Children’s Hospital to the University of Utah campus was just a dream at the time. In fact, I was told it would never happen. That dream is what got me to leave the place I loved and to come to a place I love even more.”**

**Michael Simmons, MD**, former chair, Department of Pediatrics, and former medical director, Primary Children’s Hospital



◀ On Oct 2, 1986, the new site for Primary Children’s Hospital—a \$70-million medical center west of the University of Utah School of Medicine—was dedicated. The new hospital opened in 1990 with 178 beds, with expansion capability to 226.





**“When the decision was made in the 1980s to move the hospital to the university campus, it was a tremendously transformational decision. Once we were both on the campus, it was clear that the department took off academically.”**

Angelo Giardino, MD, PhD, chair, Department of Pediatrics



▲ On April 24, 1990, Primary Children’s Hospital moved 114 patients with a fleet of eight ambulances in just over six hours. Hospital officials predicted the 2-mile move would take more than 12 hours.



▲ **Bruce Herman, MD** (left), accompanies patient Mark Christensen as he’s moved into the new hospital. Dr. Herman is now vice chair of the Education Enterprise in the Department of Pediatrics and remains in contact with Mark and his family.

**“With this move, we’re consolidating the highest level of pediatric care under one roof to serve the children of Utah and the entire Intermountain region.”**

George Veasy, MD, former physician-in-chief, Primary Children’s Hospital



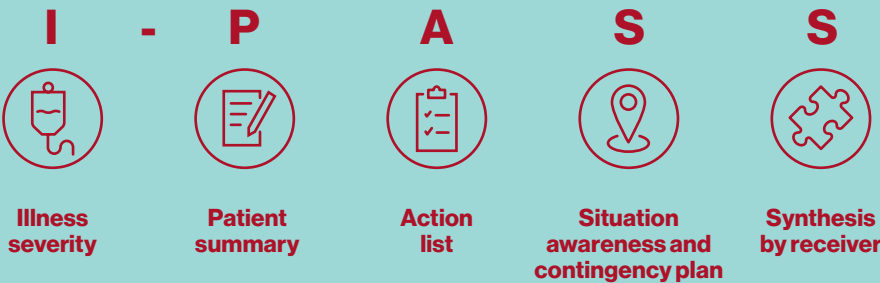
**Working together to advance the department's missions**

The collaboration has brought national recognition to the Department of Pediatrics and the university, attracted brilliant residents and faculty from across the country, and strengthened work in all the department's missions, allowing for:

- More providers and subspecialties within the Department of Pediatrics divisions
- Clinical advances like a consolidated kidney transplant program, capabilities for rapid genome sequencing, and the opening of the Cystic Fibrosis Center, which is among the highest-ranked on quality outcomes in the country
- An enhanced pediatric residency program in which trainees are more fully integrated with the hospital and focused on patient safety

**Promoting Patient Safety with I-PASS**

The I-PASS Handoff Bundle was a multi-residency program effort to improve patient/care provider communication and reduce harm. I-PASS stands for:



Primary Children's Hospital and the department's residency program worked together to implement the I-PASS program, which resulted in a reduction of medical errors and improved communication.<sup>1</sup>

**“When people do their residencies or their fellowships, they always remember the hospital they trained in. Having the department in the hospital allows trainees to feel very connected to both. They then go on to have illustrious careers and recommend that their trainees train at the hospital.”**

**Angelo Giardino, MD**, chair, Department of Pediatrics

In 2022, the university continues to work closely with Intermountain Healthcare as they build an additional Primary Children's Hospital campus about 30 miles south of the university campus. An opportunity to extend the community reach of the university and expand the residency program, it's another example of coming together to care for children and their future.



Mission 1

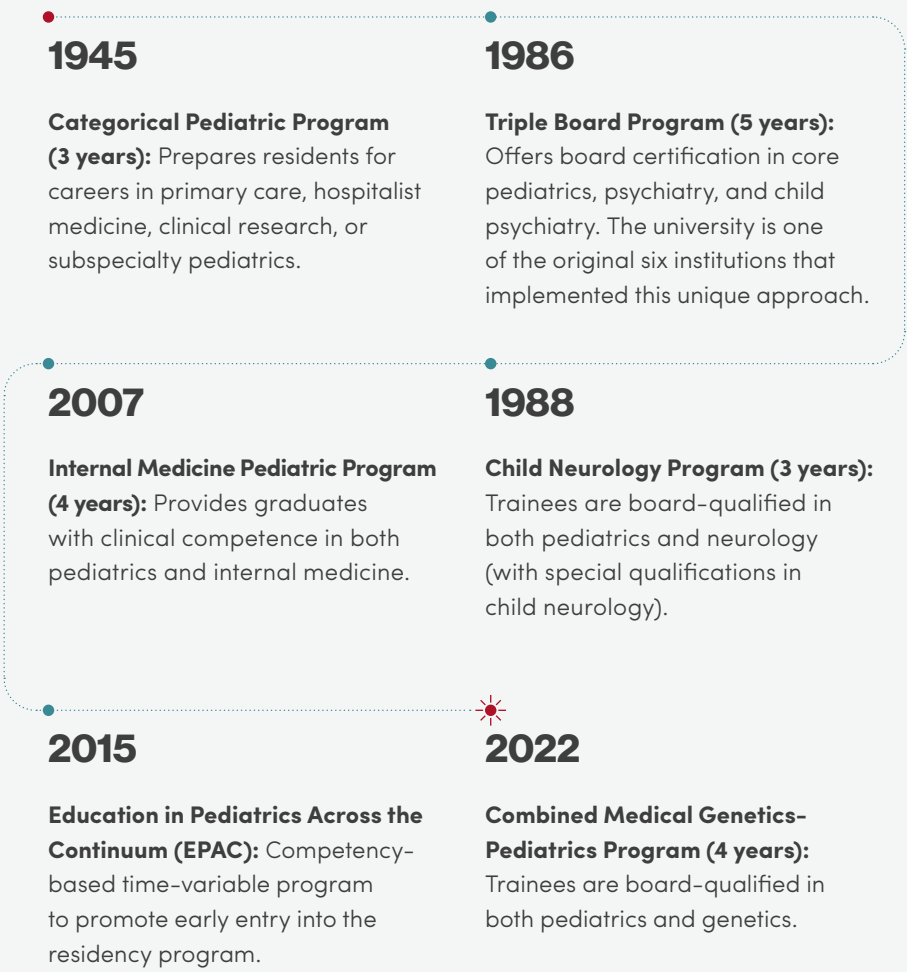
# Education

The Department of Pediatrics is dedicated to training the physicians of the future through mentorship, continuous experience, and a focus on community. Residency programs, fellowships, and clinical and research training programs provide trainees with the skills, knowledge, and experiences needed for a successful career. Throughout the department’s history, new programs and rotations have been added across general pediatrics, subspecialty pediatrics, global and rural health, and advocacy, as well as in educating trainees and faculty in clinical and bench research techniques.

## Pediatric Residency Programs: Training Tomorrow’s Pediatricians

Pediatric residency programs offer residents clinical teaching in both inpatient and outpatient settings, in addition to opportunities for research, advocacy, and academic medicine.

How Our Residency Training Has Evolved



## Preparing Doctors for Primary Care

The focus of the pediatric residency program is to prepare our future pediatric workforce. About half of our graduating residents enter primary care and the other half go on to enter sub-specialty fellowships.

In 1985, Dr. Lucy Osborn, with funding from the Department of Health and Human Services, developed a primary care model of integrating community experience into the residency program. Then in 1995, she founded the Primary Care Track of the Pediatric Residency program. One of the first generalists to join the department, she was also the first person to get funding for these residency innovations, which meant resident salaries weren’t dependent on hospital rotations.

“One of the reasons I felt so compelled to create this program

is because many residents felt unprepared going into practice,” said Dr. Osborn. “Now they’re much more confident.”

One of the current and innovative aspects of the Pediatric Residency Program is the X+Y Curriculum, which was brought to the department by Dr. Joni Hemond after she’d heard about it during a national meeting. She understood the pressures residents faced in rushing from hospital rounds to clinic and back, missing meetings with families, and getting constant pages.

Implemented in July 2020, the curriculum is set up in blocks of time where residents spend four weeks in the emergency room and four weeks in the inpatient hospital setting, for example, rather than having to rush around during half-days.

“I only had a few months of X+Y before moving on to adult psych, but even in that short time it clearly made life better. X+Y breaks up any back-to-back blocks (a classic contributor to burnout). It puts an end to clinic days on wards, and allows residents to be more present in clinic instead of worrying about what’s going on with their patients and the work they’re coming home to at the end of that day.”

Spencer Merrick, MD, resident

“With the X+Y Curriculum, when residents are in clinic, they’re with us and when they’re in the hospital, they’re with them. It’s been a stress reliever for both faculty and for learners in both settings.”

Joni Hemond, MD, FAAP, associate professor, associate program director, medical director, South Main Clinic pediatrics

# Fellowship Programs That Span Sub-Specialties

From cardiology and critical care to neonatology and neurology, the Department of Pediatrics has grown to offer fellowship programs across 15 sub-specialties.

Fellows who complete these training programs gain experience in clinical, research, administrative, and teaching from faculty committed to mentorship.

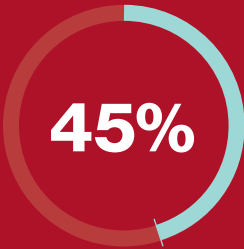
“

**Somewhere along the way, I had this realization that I’m not just their teacher, but that everything they’re doing is teaching me, too.”**

**John Carey, MD**, former chief of the Division of Medical Genetics, and founder of the Medical Genetics Fellowship program



of our graduating residents who seek sub-specialty training stay at the university to complete their fellowship training



of fellowship graduates stay on as faculty

Pediatrics Fellowships	Year Established	Number of trainees as of July 2022
Neonatology	1973	85
Hematology/Oncology	1984	42
Critical Care	1988	77
Neurology	1988	28
Emergency Medicine	1989	51
Cardiology	2000	50
Global, Rural, and Underserved Child Health	2000	10
Medical Genetics and Genomics	2000	12
Infectious Disease	2004	14
Gastroenterology	2009	14
Safe & Healthy/Child Abuse	2011	5
Endocrinology/Diabetes	2015	7
Advanced Cardiac Imaging	2016	5
Transplant Hepatology	2018	0
Hospital Medicine	2020	4
Medical Biochemical Genetics	2020	0
Nephrology	2020	1
Adult Congenital Heart Disease	2020	1
Emergency Medicine-Child Abuse	2021	1
Genomic Medicine and Gene Therapy	2021	0
Epilepsy	2022	1
Rheumatology	2022	0

# Exploring Competency-Based Curriculum

The Spencer Fox Eccles School of Medicine at the University of Utah (and the Department of Pediatrics) is one of four medical schools participating in an Association of American Medical Colleges innovative pilot project in medical education—Education in Pediatrics Across the Continuum (EPAC). Spearheaded here by Dr. James Bale and continued by Dr. Meghan O’Connor, the pilot tests the feasibility of advancing medical students and residents based on competency rather than time. With our first cohort beginning in 2015, one to four EPAC participants are selected during their second year at the SFESOM at the University of Utah.

**“EPAC is the first competency-based, time-variable program in the history of medical education in the United States, and the University of Utah is the first school to advance a GME learner through time-variable, competency-based methods.”**

**Spencer Merrick, MD**, resident



## Mission 2

# Research

When Dr. Clark arrived at the University of Utah in 1996, his vision of research included communities of scientists working together to make discoveries that would help improve the care of children. To reach that vision, he appointed Dr. James Bale as vice chair for research to build the Research Enterprise of the department. Dr. Bale was followed by Carrie Byington, MD and Rob Lane, MD as co-vice chairs. J. Michael Dean, MD, MBA, assumed the role in 2013.



**My main interest has been to make everyone in our department aware of how important research is to the future of our children. If we don't have any pediatric scientists, we won't have any progress in pediatric therapeutics and understanding of the pathophysiology of pediatric diseases."**

**J. Michael Dean, MD**, vice chair for research, and vice chairman for finance, Department of Pediatrics



### Data Coordinating Center (DCC) Established

Dr. J. Michael Dean founded the DCC in 2000 to increase the department's connections with national research networks and open up additional opportunities for discovery. The DCC has coordinated almost 100 pediatric studies nationwide with more than 70 different institutions and has generated 300 papers over the last 15 years.



### New Paths to Native American Research

In 2011, Dr. Carrie Byington founded the first Native American Summer Research Internship program. Funded in part by the National Institutes of Health, the award-winning program provides students with Native American cultural and scientific mentors. To date, 100% of enrolled students have completed the program, there have been no college dropouts, 20% have been accepted in medical school, and 28% have been accepted in graduate programs.



### Clinical Trials Office (CTO) Founded

In 2011, Dr. Clark recruited Dr. Michael Spigarelli to establish the Clinical Trials Office to provide researchers with financial guidance, contracting, and coordinators to support their clinical trials. Upon the departure of Dr. Spigarelli, Dr. J. Michael Dean assumed the leadership of the CTO.

Under Dr. J. Michael Dean's leadership, systems and structures were put in place to strengthen the university's ties with research networks, help researchers conduct clinical trials, and provide the education needed to shape future investigators.

## Expanding Avenues for Research

The Department of Pediatrics has participated in numerous federal-ly-funded research networks, including the Neonatal Research Network, the Pediatric Pharmacology Research Unit, the Pediatric Heart Network, the Pediatric Emergency Care Applied Research Network (PECARN), and the Collaborative Pediatric Critical Care Research Network (CPCCRN).

The Data Coordinating Center (DCC) also provides data coordination and management services for PECARN and CPCCRN, as well as over a dozen other national networks.

“  
**Dr. Clark really encouraged us to join these networks because they provide access to a variety of research opportunities, and help you participate in solving the problem of rare diseases.**”

**J. Michael Dean, MD**, vice chair for research, and vice chairman for finance, Department of Pediatrics

One prominent study was the Therapeutic Hypothermia after Pediatric Cardiac Arrest (THAPCA) trial investigating whether lowering the temperature of children after cardiac arrest would improve their outcomes. Funded by the National Heart, Blood, and Lung Institute (NHBLI), the data from the trial—completed in 2016—generated 40 papers, including two articles in the *New England Journal of Medicine*.

## Participation in Multiple National Clinical Databases

The department is actively participating in national clinical databases and registries that enhance the faculty’s investigative efforts to determine the best clinical care for the best outcomes.

Division	Clinical Databases/Registries	
Behavioral Health	• National Child Traumatic Stress Network	
Cardiology	• Pediatric Trials Network • Collaborative Pediatric Critical Care Research Network	• Pediatric Emergency Care Applied Research Network • Trial Innovation Network • HEAL Initiative
Critical Care	• Collaborative Pediatric Critical Care Research Network	
Emergency Medicine	• Pediatric Emergency Care Applied Research Network	
Endocrinology	• Disorders of Sexual Development Registry	• Cystic Fibrosis Registry
Gastroenterology	• SPLIT – Society for Pediatric Liver Transplantation • REPLACE Registry for Cholic Acid • ChiLDReN – Childhood Liver Disease Research Network • IMPPHR – International Multi-center Pediatric Portal Hypertension Registry • GALA – Global Alagille Alliance • Pediatric FMT (Fecal Transplant) Collaboration	• Cystic Fibrosis Foundation registry • Pediatric PSC Consortium • Pediatric ERCP Database Initiative • TNE (Transnasal Esophagoscopy) • 5-Year Utah Pediatric EoE New Diagnosis Database • Childhood Liver Disease Research Network (funding source NIDDK)
Genetics	• International Clearinghouse for Birth Defect Surveillance and Research • Task force for Global Health (CDC, WHO, ICBDSR) • Society of Birth Defects Research and Prevention • NIH Rare Diseases Clinical Research Network: PheFree Consortium	• Gaucher, Fabry disease registry • Mucopolysaccharidosis type 1 (MPS1), MPS2, MPS6, MPS7 registries • Neurofibromatosis registry
Hematology/Oncology	• Center for International Blood and Marrow Transplant Research Registry	• Children’s Oncology Group (COG) • Primary Immune Deficiency Treatment Center
Hospital Medicine	• Hydrocephalus Clinical Research Network registry	
Neonatology	• NICHD Neonatal Research Network	
Nephrology	• IROC (Improving Renal Outcomes) • NAPRTCS (North American Pediatrics Renal Trials and Collaborative Studies)	• PNRC (Pediatric Nephrology Research Collaborative) • SCOPE (Standardizing Care to Improve Outcomes in Pediatric End Stage Renal Disease)
Neurology	• Global Leukodystrophy Alliance Initiative	• Pediatric Epilepsy Learning Healthcare System
Palliative Care	• Palliative Care Quality Collaborative (PCQC)	
Pulmonary & Sleep Medicine	• portCF The National Cystic Fibrosis Data registry	• Bronchopulmonary Dysplasia Collaborative
Rheumatology	• Childhood Arthritis and Rheumatology Research Alliance (CARRA) Registry	
Safe & Healthy Families	• CAPNET	

## Gaining More Time for Research

Molly O’Gorman, MD, is professor of pediatric gastroenterology, hepatology, and nutrition at the University of Utah. She conducts clinical trials that require a lot of time in the lab, including conducting colon or rectal biopsies. Because the CTO handled the contracted negotiation for her trials, she has enough funding to devote time to research rather than working in the clinic.

**“Working with the CTO and Dr. Mike Dean has been instrumental in our efforts in Pediatric GI to generate the trial data to help the FDA approve medications for children. We treat a variety of conditions and working with the CTO, they provide a way to conduct trials that allow for us to contribute to the science and get more treatments available to the children we serve. With the CTO’s expertise and support, we can do both clinical science and clinical care at the same time.”**

Molly O’Gorman, MD, professor of pediatric gastroenterology, hepatology, and nutrition

## Coming to the Aid of Clinical Investigators

The Clinical Trials Office was established to provide clinical research support to clinical investigators and sponsors in the Department of Pediatrics, Department of Medicine, or the Department of Surgery who were conducting pediatric and adult clinical trials. This includes research coordinators who faculty can hire by the hour to enroll patients as subjects into trials.

“The Clinical Trials Office has enabled more faculty to do clinical trials who otherwise wouldn’t have been able to. It’s an important resource in the department,” said Dr. Dean.

## Opening Up Inclusive Research Opportunities

As a Mexican-American woman in medicine, Dr. Carrie Byington knows how it feels to be in an environment without role models.

To create more research opportunities for women and those under-represented in medicine, Dr. Byington, in 2007, established the Pediatric Clinical and Translational Scholar Program (PCAT). PCAT was a two-year program open to all faculty that provided holistic mentoring, leadership training, research resources, and grant support. It was later adopted throughout the university as VPCAT and has been recreated in many places around the country.

**“I never saw a role model who looked like me in the research environments in which I was training and learning. I would have appreciated having mentors to help me advance, so I wanted to create those opportunities for others.”**

Carrie Byington, MD, professor emeritus, former vice chair for Research, former health sciences associate vice president for Faculty and Academic Affairs, executive vice president of University of California Health

## A Lifeline for Basic Science Research

Siam Oottamasathien, MD, was recruited in 2007 to join the pediatric urology team at Primary Children’s Hospital and direct its basic science research program. For the first few years, he “struggled deeply, without solid direction and mentorship.” With the help of the PCAT program and mentorship from Dr. Byington, he obtained an Early Career Development K Award, and then his first NIH R01 grant in 2013.

**“Without Dr. Byington and the PCAT team, I know for certain that my basic science research mission would have invariably failed. I’m deeply indebted to Dr. Byington and her amazing support and mentorship. Simply, she changed my life and career path.”**

Siam Oottamasathien, MD, director of innovation and technology development, Department of Urology at Boston Children’s Hospital, associate professor of surgery, Harvard Medical School





## Leading the Way in Child Health

A major initiative led by Dr. Clark was the National Children’s Study, funded by the National Institutes of Health (NIH). The aim of the study was to follow kids over the years and look at all the different elements of their health and well-being to better understand how to keep them healthy.

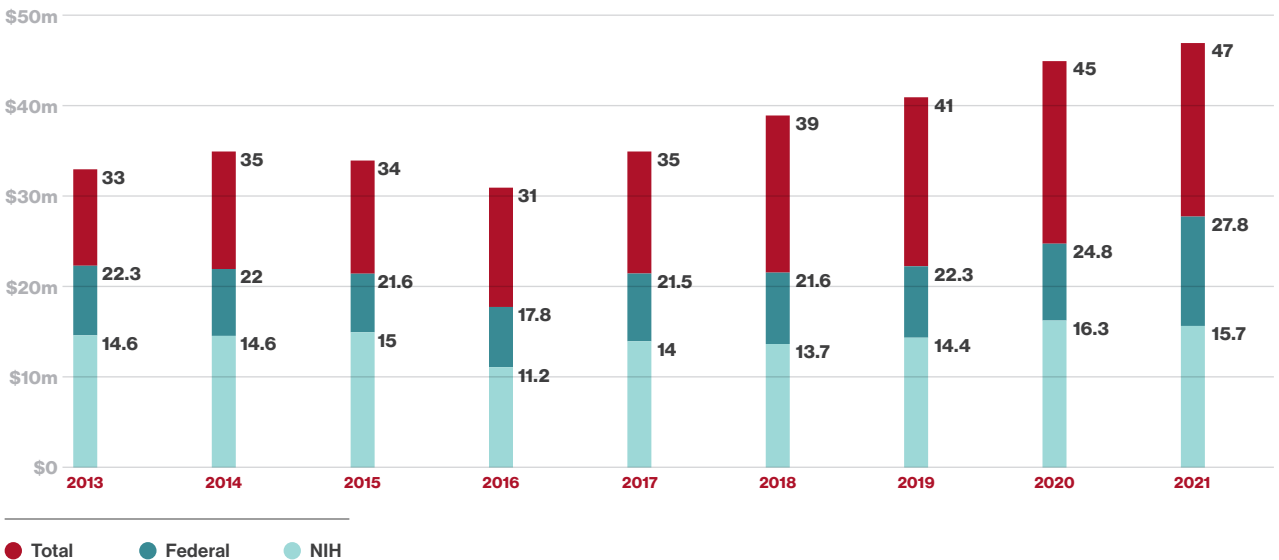
Through Dr. Clark’s connections, the department built a cohort of 900 children and their families to participate in the study. When the NIH pulled the funding for the project, Dr. Clark sought support from Congress to keep it funded. NIH then funded a portion of the study—the environmental influences on child health (ECHO). With a working cohort, the department was able to apply for and receive a grant to continue this important work.

Another initiative, the Center for Personalized Medicine, led by Dr. Josh Bonkowsky, is a collaboration with Primary Children’s Hospital, Intermountain Healthcare, and the University of Utah Department of Pediatrics that is meeting a critical need for treatments for rare diseases through research, discovery, and innovative therapies. Together, these efforts have helped patients across the Mountain West with complex cases and have helped establish close connections with the region’s communities.

## Expanding Our Research with External Funding

The Department of Pediatrics has demonstrated an impressive growth of external funding since Dr. Clark’s arrival in 1996, presenting new research possibilities and reflecting the strength of the Research Enterprise. Funding in 2021 exceeded \$47 million.

FY13 - 21 Pediatrics Grant Expenditures



Mission 3

# Clinical

Since our inception, the Department of Pediatrics has grown and adapted in response to public health and other social issues—from infectious diseases and immunizations to population health and value-based care. As such, the department has grown to include 22 divisions—all with boarded subspecialties, including Complex Care and Palliative Care.



**The Earliest NICU**

In 1968, August L. (Larry) Jung, former head of the Division of Neonatology in the Department of Pediatrics, established the first neonatal intensive care unit in the Mountain West. Beginning with only five beds, the unit expanded to 30 beds in just five years. In 1978, a sister unit was completed at PCMC and continues to be directed by the Division of Neonatology.



**Formalizing the Clinical Enterprise**

In the 1990s, John Bohnsack, MD, vice chair of Clinical Enterprise, Department of Pediatrics, laid the foundation for what would become a thriving Clinical Enterprise. Under the leadership of Dr. Clark, he worked to centralize clinical scheduling and financing, as well as championing the implementation of electronic health records and mission-based accounting to support a more integrated, financially sound enterprise.

**“Pediatrics is the second largest department at the University of Utah. By having depth in multiple specialties, like cardiology, neonatology, nephrology, and others, as well as teams of specialists, we can provide optimal care across the continuum for kids.”**

Angelo Giardino, MD, chair, Department of Pediatrics



**South Main Clinic Opens**

In 1995, the department partnered with the Department of Obstetrics & Gynecology and the Salt Lake County Department of Health to establish a prenatal and pediatric clinic for underserved families. Starting with four pediatric residents from Dr. Lucy Osborn’s Primary Care Track and two attendings (Dr. Karen Buchi and Dr. Carrie Byington), and through the steadfast support of Dr. Clark and Dr. Giardino, South Main has become the biggest primary care site of the pediatric training program with more than 35 residents.



**First Pediatric Liver Transplant Program**

In 1996, Dr. Linda Book started the first pediatric liver transplant program in the Utah area. Through the program almost 300 children have undergone liver transplants and about 90% have since thrived.



**Rapid Genetic Diagnosis Reaches the NICU**

In early 2020, investigators at the Center for Genomic Medicine launched the Utah NeoSeq Project, which uses an accelerated sequencing and analysis pipeline to provide a genetic diagnosis to NICU patients in less than a week. Rapid genetic diagnosis provides clinicians and families the ability to make critical care decisions around tests and treatments, which leads to improved outcomes and shorter NICU stays. University of Utah is one of a very small group of hospitals in the world able to offer this type of care.



**“Complex Care is a great example of how we can have a tremendously positive impact on families. It allows us to help the primary care physicians keep their practices efficient, while providing specialized care for children, and helping families achieve better outcomes for their kids.”**

Nancy Murphy, MD, FAAP, FAAPMR, professor of pediatrics, chief of the Division of Pediatric Complex Care, and adjunct faculty in the Department of Pediatrics

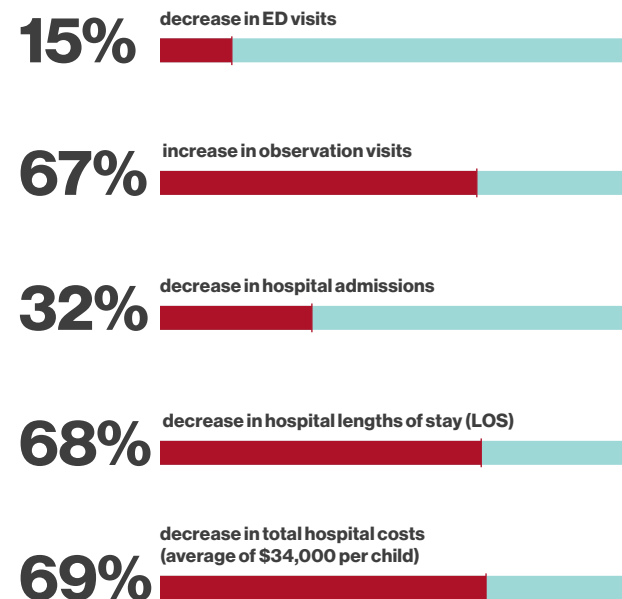
## Complex Care, Inspiring Outcomes

Dr. Clark was a staunch supporter of complex care and invested heavily in resources to advance this type of care in the department. A collaborative effort with Primary Children’s Hospital, the Comprehensive Care Program within the Division of Complex Care led by Dr. Nancy Murphy treats children who have multi-system health conditions and focuses on integrating families into their children’s care through family-centered rounds.

Research shows that care coordination [including family-centered rounds] within primary care pediatric practices is associated with fewer unnecessary office and emergency department (ED) visits, higher family satisfaction, and reduced unplanned hospitalizations and emergency department visits.<sup>2</sup>

### The Benefits of Comprehensive Care

A 10-year study of the Comprehensive Care Program<sup>3</sup> conducted by Dr. Nancy Murphy, Dr. Clark and their colleagues found that children cared for in the program—specifically those with hospital visits—resulted in:



## A Life-Changing Treatment Gives New Hope

By the time Tyler turned 10 years old, he couldn’t walk, see, or hear. But doctors couldn’t find a cause. Through cutting-edge research into genetic conditions from the Penelope Program for rare and undiagnosed diseases at the University of Utah, a life-changing treatment was found—an over-the-counter supplement (SAM-E amino acid) that helped him increase his endurance and strength after only two weeks and has improved his quality of life.

Now a clinical site in the National Institutes of Health-supported Undiagnosed Diseases Network (UDN), the Penelope Program is a partnership with the Center for Genomic Medicine at the University of Utah Health, Primary Children’s Hospital, ARUP Laboratories, and USTAR Center for Genetic Discovery.

*Tyler’s story was made into a documentary called One in a Million that premiered during the 2019 Sundance Film Festival.*

**“Why do we spend so much time and resources on conditions like Tyler’s, whose is one in a million? One child in a million is an important child.”**

Lorenzo Botto, MD, professor of pediatrics at the Spencer Fox Eccles School of Medicine (SFESOM) at the University of Utah, who diagnosed and treated Tyler



## Eliminating Health Inequities

Pediatricians strive to serve all children, regardless of their need. However, the department acknowledges that there is disparity in care based on factors like a person's language or ethnicity.

For many years, the Department of Pediatrics focused on ensuring that women on the faculty were treated equitably as compared to their male colleagues. In the clinical realm, the department invested in community engagement efforts around promoting enrollment of those who are underserved in the Medicaid and Children's Health Insurance Program. In addition, efforts were focused on serving the community at South Main Clinic, via the GRUCH program's efforts in Chinle, and sponsoring pathway programs for those who are under-represented in medicine, such as NARI and GSRM.

In the tumultuous aftermath of the video-recorded murder of George Floyd in May 2020, the department came to see that while these efforts were necessary, they were not sufficient to confront our growing awareness of the enormity of the disparities in health care that surround us, and the lack of diversity among our faculty and staff workforce. In response to this realization—and to a demand for action by our Pediatric Residents (via a self-organized Anti-Racism Workgroup)—the department formed a health equity steering committee in collaboration with Primary Children's Hospital leaders.

Beginning with a Call to Action in the Summer of 2020, divisions and programs were asked to develop 100-day plans to assess their clinical, education, and research efforts using a diversity, equity, and inclusion lens followed by concrete actionable steps to confront any inequities identified. The department then began a listening tour, taking on a culturally humble perspective. In addition to listening and learning, the department is strengthening its interpreter program—in collaboration with Primary Children's Hospital—to break down language barriers. Additionally, faculty and staff continue to invest in programs for children with issues that frequently go unaddressed, like the Adolescent Gender Management and Support (GEMS) Services and Therapy program.

"We developed a treatment plan for kids with gender issues, just like we do with those who have asthma, pneumonia, gastrointestinal, kidney or neuro problems," said Dr. Giardino. "We're not going to leave any vulnerable child on their own because some don't like the issue they have."

“

**In our approach to patient care, we try to be non-political, and instead find out what's happening with our patients. We're looking at our data and we want to make marked improvement in eliminating health inequities.”**

Angelo Giardino, MD, chair, Department of Pediatrics



Mission 4

# Advocacy and Community Engagement

For decades, the University of Utah Department of Pediatrics has served as a champion for children’s health and well-being across the Mountain West. From the Community Pediatrics and Advocacy rotation, to partnerships with community organizations, to advising individual patients, the department advocates for children on every level.

**“Advocacy should really be part of the job for every faculty member at a state institution like ours. It’s our role to pay attention to the world around us, see the problems in our areas of expertise, and work together to change things.”**

**Karen Buchi, MD**, professor, vice chair of pediatrics, and former chief of the Division of General Pediatrics



**Center for Safe and Healthy Families**

Advocating for child safety is an integral part of the Department of Pediatrics. Dr. William (Marty) Palmer formalized the role of child protection in our department and laid the groundwork for the establishment of the Center for Safe and Healthy Families which opened its doors in 2002. A collaboration between the Department of Pediatrics and Primary Children’s Hospital, the center provides medical and mental health services to suspected victims of child abuse and neglect, and to their families.



**Utah Chapter of the American Academy of Pediatrics (UAAP)**

The Department of Pediatrics has been closely associated with the UAAP ever since there was a pediatric community in the state. Formerly called the Intermountain Pediatric Society, the UAAP has a long tradition of alternating the president position between a community pediatrician and a Department of Pediatrics faculty member, which helps keep academic pediatrics in touch with our community partners.



**Utah Pediatric Partnership to Improve Healthcare Quality (UPIQ)**

The Utah Pediatric Partnership to Improve Healthcare Quality (UPIQ) was established in 2003 by Dr. Chuck Norlin in the Division of General Pediatrics and supported by the UAAP. UPIQ has improved the quality of pediatric care in the community through learning collaboratives. Now led by Dr. Diane Liu, UPIQ is partnering with Neal Davis, MD, medical director for Intermountain Child Health, to improve the identification and management of pediatric behavioral health issues in community primary care practices.



“  
The guidance we  
give impacts the  
future of children.  
And when you  
impact a child’s  
future, you’re  
impacting a  
society’s future.”

Joni Hemond, MD, FAAP, associate professor,  
associate program director, medical director,  
South Main Clinic pediatrics

## Teaching and Advocacy in the Community

Through the Community Pediatrics rotations and the advocacy time required of residents, the department provides future physicians with a sense of what it’s like to be in the community practicing pediatrics, while showing them how to advocate on behalf of patients.

## Opioid Crisis in Utah

In 2012–2014, Utah had the fourth-highest drug overdose deaths in the United States—mostly due to opioids. Jennifer Plumb, MD, MPH, established the Utah Naloxone Program in 2015 to prevent opioid overdose death in Utah. A 2020 report showed that naloxone saved more than 4,000 Utahns from overdosing on opioids.

### Impact on Maternal and Child Health

In 2014, nearly 6000 Utah women entered publicly-funded substance use treatment programs—5% were pregnant on admission. Opioids and methamphetamines were the drugs most frequently used. Opioid use during pregnancy often results in complications for the newborn (Neonatal Abstinence Syndrome, now called Neonatal Opioid Withdrawal Syndrome). The University of Utah Divisions of General Pediatrics and Neonatology became the regional experts in the care of these newborns. These divisions work collaboratively with the Department of Obstetrics and Gynecology to provide patient-centered obstetric and pediatric care to these mother/infant dyads.

## Putting Concepts into Action at South Main Clinic



### Assessing the Need

At South Main, the Department of Pediatrics completed a needs assessment in which interns ask families questions about how they get food. After learning that almost every parent they asked has had trouble getting food, the experience helped interns change the way they ask questions during their well child checks and provide better care.



### Addressing Food Insecurity

Because many patients who visit community clinics have trouble getting food, Dr. Wendy Hobson-Rohrer, executive medical director at South Main Clinic, established the clinic as an official food bank site. Now, if physicians learn that their patients can’t get food, they can just pick up a box of food and give it to them during their appointment. Residents also wrote a community health grant that enables patients in the clinic to pick up a voucher that they can present at their local grocery store for fresh or frozen produce.

“This is a great example of how, after learning about community pediatrics, residents were able to put it into action,” said Dr. Hemond.



### Advocating for Teenage Parents

During a well child check, a resident asked a teenage parent about the foods she was giving her baby and found that she was putting soda in her baby’s bottle. After talking to her about the health implications, she stopped giving her baby soda.

“That little conversation probably changed her baby’s life for the better,” said Dr. Hemond.



This historical review of our Department of Pediatrics began with the recognition that we as a department of faculty and staff are “devoted to making a difference” in the lives of the children and families, both in our community and beyond.

Taking the time to recall many of the dramatic leaps forward, as well as recognizing the ongoing care and concern modeled by our team, gives one great hope that bright, talented, and mission-driven faculty and staff will continue to apply their time and effort towards improving the health and well-being of children for generations to come.

In some ways the challenges are similar to those faced by our predecessors who addressed head-on the conditions that confronted children in their time. In other ways, however, our newer generations of providers face different challenges around promoting the health and well-being of the children and families we serve. The newer morbidities that confront children and adolescents tend to require multi-disciplinary care, incorporating technologies that would have stretched the imaginations of even the most forward-thinking of our predecessors from decades gone by. But, despite this change, the department remains forward-thinking, consummately adaptable, and singularly focused on that devotion to make a difference in the lives of children and families.

The Department of Pediatrics remains steadfast in its commitment to the training of the next generation of pediatricians and with our attention, this next generation will be more diverse and inclusive than the previous one. The department is resolute in its long-standing tradition

of investing in research and a broad range of scholarly activities that discover new knowledge and evaluate care with an eye towards defining best practices. The delivery of high-quality care and service to our patients will always be at the foundation of our teaching and research efforts, and we take great pride in being evidence-informed and patient- and family-centered. Additionally, we will remain active in balanced and informative advocacy in areas where we can help influence public and private initiatives to promote the health and well-being of children.

In closing, while looking forward to the frontier of pediatric care, we are reminded of the quote attributed to Sir Isaac Newton who, when asked why he could see so far, responded with words similar to “because I stand on the shoulders of the giants who came before me.” We, as current stewards of the Department of Pediatrics, can envision a future where we continue to advance the positive trajectory of pediatrics because we have the great privilege of standing upon the shoulders of those committed academic leaders who built, grew, and bequeathed this vibrant and productive department to us for safekeeping.

**Angelo Giardino, MD, PhD**  
Chair, Department of Pediatrics

# Appendix 1: Timeline

## 1940s-1960s

- **1943:** With only two full-time faculty, **the Department of Pediatrics at the University of Utah was born** with Dr. John Anderson as chair, serving until 1949.
- **1944:** The **Division of General Pediatrics** was established.
- **1945:** The **Categorical Pediatric Residency Program was established**, preparing residents for careers in primary care, hospitalist medicine, clinical research, or subspecialty pediatrics.
- **1949:** **Dr. James Bosma** appointed **chair** of the Department of Pediatrics, serving until 1959.
- **1959:** **Dr. Eugene Lahey** appointed **chair** of the Department of Pediatrics, serving until 1972.
- **1960:** The **Division of Neurology** was established.
- **1967:** The **Division of Endocrinology** was established.
- **1967:** The **Division of Gastroenterology** was established.
- **1967:** The **Division of Hematology/Oncology** was established.
- **1968:** The **Division of Infectious Disease** was established.
- **1968:** The **Division of Neonatology** was established.
- **1968:** **Dr. Richard Hebertson** appointed **acting chair** of the Department of Pediatrics, serving until 1970.
- **1968:** Dr. Eugene Lahey appointed the **first full-time faculty member at PCMC: Dr. L. George Veasy**, director of Pediatrics Education and Research, who would eventually coordinate the move of PCMC to the university campus in 1990, a milestone that opened new opportunities for growth, including attracting more candidates to the university faculty on a wider national scale.

- **1968:** Dr. August L. (Larry) Jung, former chief of the Division of Neonatology in the Department of Pediatrics, established **the first neonatal intensive care unit** in the Mountain West area. Beginning with only five beds, the unit expanded to 30 beds in just five years.

- **1968:** The **Division of Cardiology** was established.

## 1970s-1980s

- **1974:** **Dr. Lowell Glasgow** appointed **chair** of the Department of Pediatrics, serving until his premature death in 1982.
- **1978:** The **Division of Medical Genetics** was established.
- **1982:** **Dr. Richard Siegler** appointed **acting chair** of the Department of Pediatrics, serving until 1983.
- **1983:** **Dr. Michael Simmons** appointed **chair** of the Department of Pediatrics, serving until 1994.
- **1984:** The **Division of Nephrology** was established.
- **1985:** The decision was made to **move Primary Children’s Hospital next door to the University Hospital**—a transformational commitment that would help the department grow in all of its missions, attract the best faculty from across the country, and gain national recognition.
- **1986:** The **Triple Board Residency Program** was established, offering board certification in core pediatrics, psychiatry, and child psychiatry. The university is one of the original six institutions that implemented this unique approach.
- **1986:** The **new site for Primary Children’s Hospital**—a \$70-million medical center west of the University of Utah School of Medicine—was dedicated.
- **1987:** The **Division of Critical Care** was established.
- **1988:** The **Child Neurology Residency Program was introduced**, providing trainees with board qualification in both pediatrics and neurology (with special qualifications in child neurology).

- **1988:** The **Division of Allergy & Immunology** was established.
- **1988:** The **Division of Rheumatology** was established.

### 1990s

- **1990:** The **new Primary Children’s Hospital** opened with 178 beds, with expansion capability to 226. On April 24, 1990, Primary Children’s moved 114 patients to the new hospital with a fleet of eight ambulances in just over six hours.
- **1994:** **Dr. J. Michael Dean** appointed **interim chair** of the Department of Pediatrics, serving until 1996.
- **1995:** **Dr. Lucy Osborn** established the **Pediatric Primary Care Track of the Residency Program**. With a focus on community practice, it was one of the first funded residencies in the department.
- **1995:** The Department of Pediatrics partnered with the Salt Lake County Department of Health to establish **South Main Clinic**, a prenatal and pediatric clinic for underserved families. Starting with four pediatric residents from Dr. Lucy Osborn’s Primary Care Track and two attendings (Dr. Karen Buchi and Dr. Carrie Byington), South Main has become the biggest primary care site of the pediatric training program with more than 35 residents.
- **1996:** Dr. Linda Book started the **first pediatric liver transplant program** in the Utah area. Through the program, almost 300 children have undergone liver transplants and about 90% have since thrived.
- **1996:** **Dr. Edward B. Clark** appointed **chair** of the Department of Pediatrics, serving until 2017.
- **1988:** The **Division of Emergency Medicine** was established.

### 2000s

- **2000:** Dr. J. Michael Dean founded the **Data Coordinating Center (DCC)** to increase the department’s connections with national research networks and uncover additional opportunities for discovery.

- **2001:** The **Medical Genetics Residency Program** was established.
- **2002:** The **Division of Safe & Healthy Families** was established.
- **2002:** The Department of Pediatrics and Primary Children’s Hospital opened the **Center for Safe and Healthy Families**, which provides medical and mental health services to suspected victims of child abuse and neglect, and to their families.
- **2003:** The **Division of Hospital Medicine** was established.
- **2004:** The **Division of Ethics** was established.
- **2004:** The **Division of Pulmonary & Sleep Medicine** was established.
- **2004:** The **Internal Medicine Pediatric Residency Program** was established, providing graduates with clinical competence in both pediatrics and internal medicine.
- **2007:** Dr. Carrie Byington established the **Pediatric Clinical and Translational Scholar Program (PCAT)**, now Vice President’s Clinical Translational (VPCAT) Research Scholars, to create more research opportunities for women and underrepresented minorities.
- **2007:** The **Division of Behavioral Health** was established.

### 2010s

- **2010:** The **Division of Clinical Pharmacology** was established.
- **2011:** The **Division of Adolescent Medicine** was established.
- **2011:** Dr. Edward B. Clark recruited Dr. Michael Spigarelli to Utah to establish the Clinical Trials Office (CTO) to provide researchers with financial guidance, contracting, and coordinators to support their clinical trials.

- **2011:** Dr. Carrie Byington founded the first **Native American Summer Research Internship program**. Funded by the National Institutes of Health, the award-winning program provides students with Native American cultural and scientific mentors.
- **2014:** The Department of Pediatrics initiated its first medical student cohort in the **Education in Pediatrics Across the Continuum (EPAC)** program, which tests the feasibility of advancing medical students and residents based on competency rather than time. The University of Utah is one of four medical schools participating in this innovative project.
- **2015:** The **Division of Complex Care** was established.
- **2015:** Under Dr. Edward B. Clark’s leadership, the Department of Pediatrics and Primary Children’s Hospital created the **Comprehensive Care Program** to treat children who have multi-system health conditions.
- **2016:** University of Utah Health established the **Penelope Program** for children with rare and undiagnosed diseases. The program focuses on children with serious, complex conditions who remain without a diagnosis despite multiple evaluations.
- **2018:** **Dr. Angelo Giardino** appointed **chair** of the Department of Pediatrics, and currently still serving.

### 2020s

- **2020:** Dr. Joni Hemond implemented the innovative **X+Y Curriculum** to provide a more focused experience for residents in hospital and clinic practice.
- **2020:** Investigators at the Center for Genomic Medicine launched the **Utah NeoSeq Project**, which uses an accelerated sequencing and analysis pipeline to provide a genetic diagnosis to NICU patients in less than a week. University of Utah is one of a very small group of hospitals in the world able to offer this type of care.
- **2021:** The **Division of Palliative Care** was established.

- **2022:** The **Combined Medical Genetics–Pediatrics Residency Program** was established, with trainees board qualified in both pediatrics and genetics.
- **2022:** The Department of Pediatrics is currently the **second largest department in the** Spencer Fox Eccles School of Medicine (SFESOM) at the University of Utah, which includes 320+ faculty members. More than half the faculty are women—the greatest number of tenured and adjunct female faculty in the SFESOM.

# Appendix 2: Resources

## Live Interviews

- John Bohnsack, MD, vice chair of Clinical Enterprise, Department of Pediatrics, Jan 19, 2022.
- Linda Book, MD, professor of pediatrics, former chief of the Division of Pediatric Gastroenterology, Jan 26, 2022.
- Karen Buchi, MD, professor of pediatrics, vice chair of pediatrics, and former chief of the Division of General Pediatrics, Dec 5, 2021.
- Carrie Byington, MD, professor emeritus, former vice chair for research, Feb 3, 2022.
- John Carey, MD, MPH, emeritus professor, former chief of the Division of Medical Genetics, and founder of the Medical Genetics Fellowship program, Jan 18, 2022.
- J. Michael Dean, MD, MBA, Jan 31, 2022.
- Angelo Giardino, MD, PhD, chair, Department of Pediatrics, Jan 17, 2022.
- Joni Hemond, MD, FAAP, associate professor of general pediatrics, medical director for the Teen Mother and Child Program/Teen Health Clinic at South Main Clinic, Jan 19, 2022.
- Lucy Osborn, MD, MPH, emeritus professor, former chief of the Division of Medical Genetics, and founder of the Medical Genetics Fellowship program, Jan 18, 2022.
- Katy Welkie, vice president of children’s health and CEO Primary Children’s Hospital at Intermountain Healthcare, Jan 19, 2022.
- Michael Simmons, MD, former chair, Department of Pediatrics, and former medical director, Primary Children’s Hospital, Feb 17, 2022.

## Oral Histories

- Joseph Newton, MD, 2015, Spencer S. Eccles Health Sciences Library, University of Utah. Available at <https://collections.lib.utah.edu/ark:/87278/s6mm0j4q>.

## Publications, Articles and Films

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- “Medicine in the Beehive State, 1940–1990,” Henry P. Plank, University of Utah, 1992.
- *One in a Million*, Geralyn Dreyfous, the Kahlert Foundation and University of Utah Health, 2019. Available at <https://uofuhealth.utah.edu/oneinamillion/>.
- “Primary Children’s Completes Move,” *Daily Utah Chronicle*, April 24, 1990.
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# Endnotes

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2. Council on Children with Disabilities and Medical Home Implementation Project Advisory Committee, Renee M. Turchi, Richard C. Antonelli, Kenneth W. Norwood, Richard C. Adams, Timothy J. Brei, Robert T. Burke, Beth Ellen Davis, Sandra L. Friedman, Amy J. Houtrow, Dennis Z. Kuo, Susan E. Levy, Susan E. Wiley, Miriam A. Kalichman, Nancy A. Murphy, W. Carl Cooley, Joan Jeung, Beverly Johnson, Thomas S. Klitzner, Jennifer L. Lail, Linda L. Lindeke, Amy Mullins, Lee Partridge, William Schwab, Christopher Stille, Debra Waldron, Nora Wells, Calvin Sia; Patient- and Family-Centered Care Coordination: A Framework for Integrating Care for Children and Youth Across Multiple Systems. *Pediatrics* May 2014; 133 (5): e1451–e1460. 10.1542/peds.2014–0318. Available at <https://publications.aap.org/pediatrics/article/133/5/e1451/32796/Patient-and-Family-Centered-Care-Coordination-A>.
3. Nancy A. Murphy, Justin Alvey, Karen J. Valentine, Kilby Mann, Jacob Wilkes, Edward B. Clark; Children With Medical Complexity: The 10-Year Experience of a Single Center. *Hospital Pediatrics* August 2020; 10 (8): 702–708. Available at <https://doi.org/10.1542/hpeds.2020–0085>.

# The Child First and Always

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