

SURGERY

Synopsis

UW Medicine
DEPARTMENT OF SURGERY

Chairman's Message



Carlos A. Pellegrini, MD,
FACS, FRCSI (Hon.)
The Henry N. Harkins
Professor & Chair

Friends & Colleagues of the Department of Surgery:

As I write, the Seahawks have just returned from their victory over the Broncos and Seattle is throwing a city-wide party. It has been quite a spectacle, with blue and green and 12th Man flags everywhere. Even if you like football only a little, it is hard not to get caught up in the celebration.

In this issue, *Surgery Synopsis* focuses on our Pediatric mission as carried out through [Seattle Children's Hospital \(SCH\)](#). SCH is often referred to as a "place where miracles happen." When infants and children are helped and healed, it is a miracle. You will read a first-hand account by one of our own surgeons, [Dr. Kris Calhoun](#), whose infant son, August (Gus) received life-saving heart surgery at Seattle Children's Hospital. The story is touching and has a happy ending: one of those miracles.

Seattle Children's was just named by an on-line publication as one of the top five children's hospitals in America. They based this rating on the amazing Craniofacial Center, led by [Dr. Richard Hopper](#). I invite you to read the accolades <http://dailyparent.com/articles/the-nations-top-five-pediatric-hospitals/>.

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Seattle Children's Hospital Surgical Programs: Then and Now

Editor's Note: [Robert Sawin, MD](#), Professor and Chief of the Division of Pediatric Surgery in the Department of Surgery, and Surgeon-in-Chief at Seattle Children's Hospital, provided this brief history of the development of Surgery within SCH and SCH's affiliation with UW School of Medicine:

In 1919, Dr. Herbert Coe began operating at Children's Orthopedic Hospital (COH) in Seattle, Washington. At that time, he was one of just three surgeons in the U.S. to devote his practice to the surgical care of children. A true general surgeon in the broadest terms, Dr. Coe performed all types of surgery for children, and specialized in surgical treatment of cleft lip and palate, foreshadowing the development of one of the world's best and largest Craniofacial Surgery programs decades later. In 1947, Dr. Coe was one of a dozen surgeons who influenced the American Academy of Pediatrics to establish a Surgical Section, thus leading the way to the recognition of Pediatric Surgery as a sub-specialty. Shortly thereafter, Dr. Sandy Bill came to Seattle from Boston and put the Pediatric Surgery program here on the map. He created one of the first Pediatric Surgery fellowship training programs in 1967-68, and it has progressed to be one of America's top training programs.



Robert Sawin, MD

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Chairman's Message — *Continued from page 1*

Seattle Children's is often on the forefront of change – not only in new techniques and treatments, but in how care is delivered. For example, the hospital was an early adopter of process improvement and [LEAN methodology](#). Given the substantial needs of infants, children and their families and the response of the care providers at SCH improvements on delivery of care have occurred at a relatively rapid rate. You will learn about several innovations in care such as “clinical standard work” for the more routine diagnoses and the multi-disciplinary, long-term approach taken to support patients with congenital conditions. SCH surgical services introduced 7-day-a week surgical clinics as well as “attending of the week” rounds in which an attending leads as team of nurses, dieticians, pharmacists and discharge planners on daily rounds to see all patients on that service. Our surgeons are very much a part of these innovations. In this issue you will be introduced to all the surgeons at SCH and learn more about their specialties and academic interests.

[Don Miller, MD](#), Professor Emeritus retired from the Division of Cardiothoracic Surgery. A tribute to his professional life and career is in this issue of *Surgery Synopsis*. I think you will find it interesting learn more about this multi-faceted man and impressive surgeon. We thank Dr. Miller for his years of dedicated service to the Department and to the [VA](#).

[Patch Dellinger, MD](#), Professor has stepped down as Chief of the Division of General Surgery and [Brant Oelschlager, MD](#), Professor has been appointed Chief. This has led to several changes in the leadership of the General Surgery Division. We are appreciative for the 23 years Patch devoted to being Chief and grateful he is remaining in the Department in clinical practice. The changes in General Surgery are outlined in this edition of *Surgery Synopsis*.

On January 30 and 31st, the Department held the [20th Annual Helen & John Schilling Lecture](#). From start to finish, this year's Schilling Day was exceptional. The presentations by residents were excellent and our guest speaker, [Timothy R. Billiar, MD](#), the George Vance Foster Endowed Professor and Chair of the Department of Surgery and Director of the Trauma Research Center at the University of Pittsburgh in Pittsburgh, Pennsylvania delivered a most outstanding talk: “Of Men and Mice: An Iterative Strategy to Dissect the Immune Response to Trauma.”

Finally, as always, our surgeons continue to receive awards and honors. Of particular interest, is the attention generated by “Google Glass” and possible uses in the OR. [Dr. Heather Evans](#), Assistant Professor, is working with Google Glass to see what help it may provide for surgeons as they operate and assessing possible drawbacks. It is an interesting technology with unfolding benefits and challenges.

I hope you enjoy this issue of *Surgery Synopsis*.

Sincerely,

Carlos A. Pellegrini, MD, FACS, FRCSI (Hon.)
The Henry N. Harkins Professor & Chair
Department of Surgery
University of Washington

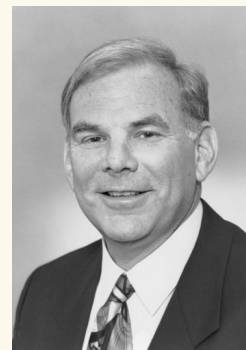
SCH: Then and Now

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In 1974, the Board of Trustees at COH decided that affiliation with the [University of Washington School of Medicine](#) was strategically important. That affiliation was contentious because of the extensive involvement of community physicians and surgeons in the care of children. Yet ultimately, it proved to be a major stimulus to the growth and the prestige of the institution, and enabled recruitment of top-flight academic physicians to practice at COH. Though community pediatricians are very welcome and admit and follow patients at [Seattle Children's Hospital](#), a strong core of pediatric doctors (including pediatric surgeons) is employed by the Seattle Children's physician practice plan (Children's University Medical Group or CUMG – a parallel organization to UWP). These individuals all have appointments in the UW School of Medicine, proceed through the ranks of promotion and enjoy all the rights and privileges of UW faculty. Pediatric surgery is an integral part of the Department of Surgery and the Department is proud that we have such outstanding pediatric surgeon colleagues.

David Tapper, MD

became the first full-time Surgeon-in-Chief in 1983, and over his marvelous tenure until his premature death in 2002, he built a first-rate academic surgical program by expanding from just two pediatric general surgeons and three other surgical specialists to 19 academic surgeons in every discipline.



David Tapper, MD

One of his additional legacies was the development of a pediatric renal transplant program in 1983. This program has now grown into one of the largest children's hospital transplant programs in the country, transplanting nearly 60 organs annually, including kidneys, livers, intestines and hearts.

During Dr. Tapper's time, COH became Children's Hospital and Regional Medical

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Seattle Children's Hospital: Then and Now

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New Seattle Children's Hospital Campus

Photo credit: Erik Stuhaug, Seattle Children's Hospital

Center, (CHRC) and ultimately changed its name to Seattle Children's Hospital (SCH) in its centennial year of 2007.

SCH provides care for children for the entire [WWAMI region \(Washington, Wyoming, Alaska, Montana, and Idaho\)](#) and so it has continued to grow to meet the demands of Seattle and of the greater region. The recent new "Building Hope" expanded bed capacity to 323 licensed beds. Surgical Services have also expanded and we now have more than 40 UW School of Medicine surgical faculty members who practice here in every surgical discipline. The excellence of their clinical care and their teaching has led many of our residents to choose careers in pediatric surgical specialties, enhancing our legacy even further.

Known for early adoption of processes and pathways that benefit children and their families, SCH embraced and, as a whole system, adopted the [LEAN methods](#) (process improvement methods adapted from Toyota Manufacturing to healthcare). This has led to a series of changes that benefit children and families, including 7-days-per week access to General Surgery clinics at the SCH - Seattle campus and a system in which an "attending of the week" leads a team of nurses, dietitians, pharmacists and discharge planners on daily rounds to see all patients on that service. At these rounds the team members talk to the families and patients, answer questions, solve problems and make plans around the needs and concerns of the patient and their family.

Surgeons at SCH believe in following the evidence and changing *how* care is given as enthusiastically as they learn a new technique to change *what* care is given. Consequently,

most of the surgical faculty, in addition to clinical work, lead or participate in important initiatives or teams that further the clinical, educational and research aims of SCH. For example, in addition to his clinical practice, [Dr. George Drugas](#) is head of Quality Improvement for Operative Services.

LEAN principles center on driving out waste and variation that causes mistakes. SCH has developed a number of clinical standard work pathways for patients with "common" (frequent) diagnoses to ensure that appropriate, timely and cost-effective care is given each time, to each patient. Some of these standardized pathways focus on: appendicitis, feeding difficulties requiring gastrostomy tubes, inflammatory bowel disease, pyloric stenosis, chest wall defects, gastroschisis, and central line management. All faculty have participated in the development and implementation of these pathways. [Dr. Daniel Ledbetter](#) and [Dr. Adam Goldin](#) are working both to expand the scope of the appendicitis pathway across the state of Washington and to work with a nationwide collaborative group of children's hospitals to improve care of these patients.

Long-term follow-up and management of complex congenital problems requires a different kind of innovation in care. To provide the continuity and expertise these patients require for an ideal long-term outcome, special multidisciplinary clinics with dedicated pediatric medical and surgical specialists, nurses, dietitians, and therapists have been established. Patients with anorectal malformations are seen in the [Reconstructive Pelvic Medicine \(RPM\)](#) clinic by urologists, gynecologists and general surgeons, including

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Seattle Children's Hospital: Then and Now

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[Dr. Jeffrey Avansino](#). Patients with short bowel syndrome are seen in the Intestinal Rehabilitation Program by gastroenterologists and [Dr. Patrick Javid](#) as the general surgeon. Children who have congenital diaphragmatic hernia, pulmonary hypoplasia and neonatal lung resections are seen in the [Surgery Pulmonary Follow-up \(SPF\)](#) clinic by a pulmonologist and general surgeon (Dr. Ledbetter). These clinics are a "medical home" for these patients as they grow and develop and provide important continuity for the children and their families.

Overview: Pediatric Surgery Faculty, Divisions and Services

Pediatric Surgery at SCH is led by Robert Sawin, MD, Professor and Chief of Surgery at Seattle Children's Hospital. SCH division chiefs for those specialties within the Department of Surgery are: [John Waldhausen](#) (General and Thoracic Surgery); [Richard Hopper](#), (Plastic and Craniofacial Surgery); [Patrick Healey](#), (Transplant Surgery); and [Jonathan Chen](#) (Congenital Cardiac Surgery). The Department of Surgery has 22 pediatric surgeons who provide the most advanced pediatric surgical care. Below is more about each of them:

Pediatric General Surgery

This division is the largest of the pediatric surgical specialties. It provides the full spectrum of general surgery services with all faculty practicing general and thoracic surgery, oncology surgery, and newborn surgery including minimally invasive surgical techniques. In addition, many faculty members have areas of clinical specialization. General surgeons include:



[Jeffrey Avansino, MD](#), Associate Professor, with special interest in anorectal malformations and chest wall anomalies;



[George Drugas, MD](#), Associate Professor, with special interest in Quality Improvement;



[Adam Goldin, MD](#), Associate Professor, with special interest in inflammatory bowel disease and gastrointestinal surgery;



[Kenneth Gow, MD](#), Associate Professor, with special interest in pediatric surgery oncology;



[Patrick Healey, MD](#), Associate Professor, both a fellowship-trained pediatric general surgeon and transplant surgeon. Dr. Healey's general surgery focus is pediatric liver surgery, including correction of biliary atresia and liver resection for tumors;



[Patrick Javid, MD](#), Assistant Professor, with special interest in intestinal failure and chest wall anomalies;



[Daniel Ledbetter, MD](#), Associate Professor with special interest in endocrine surgery, neonatal general surgery, and congenital diaphragmatic hernia;

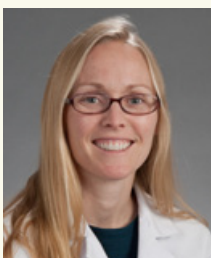
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[John Meehan, MD](#), Associate Professor, with special interest in chest wall anomalies and robotic surgery techniques;



[Kimberly Riehle, MD](#), Assistant Professor; with special focus on liver research (read her research profile in later pages);



[Robert Sawin, MD](#), Professor and Surgeon-in-Chief, Seattle Children's Hospital, with special interest in thoracic surgery and chest wall anomalies;



[John Waldhausen, MD](#), Professor and Chief of Pediatric General and Thoracic Surgery, with special interest in inflammatory bowel disease, thoracic surgery, and oncology.

Congenital Cardiac Surgery

The congenital cardiac surgery division works closely with pediatric cardiology, pediatric cardiac anesthesiology, critical care medicine, nursing and perfusion to comprise the [Heart Center at Seattle Children's](#). The Heart Center serves the entire Pacific Northwest, with regional offices throughout Alaska, Montana, and Washington. Our regional program performs approximately 500 cases per year, and we offer a comprehensive array of mechanical circulatory assist

devices for children with heart failure. This program ranks among the top five pediatric heart transplant programs in the country, and is one of the nation's leaders in [Extracorporeal Membrane Oxygenation \(ECMO\)](#) therapies. In addition, the Program is one of the first to offer an ACGME-accredited congenital cardiac surgery fellowship training program (one of only 12 in the United States). The larger regional congenital cardiac surgery program includes operations performed at the Mary Bridge/MultiCare site in Tacoma, as well as adult congenital operations performed at the University of Washington.



McMullan



Permut



Chen

We owe a debt of gratitude to our long-term and very committed surgeons, [D. Michael McMullan, MD](#), Associate Professor and [Lester Permut, MD](#), Associate Professor who, over the past 1.5 years, expertly provided all pediatric cardiac surgery care during recruitment for a new Chief and new faculty at Mary Bridge Hospital. We are happy to report that [Dr. Jonathan Chen](#) became the Chief of Pediatric Cardiac Surgery in July 2013 and in 2014, the Division will welcome two new faculty members: [Dr. Muhammad Nuri](#), site chief at the Mary Bridge/Multicare site, and [Dr. Joshua Hermsen](#), the associate surgical director of the adult congenital heart disease program at UW.

Pediatric Craniofacial and Plastic Surgery

[Richard Hopper, MD](#), Associate Professor is Chief of Pediatric Plastic Surgery. Other faculty in pediatric plastic surgery include: [Joseph Gruss, MD](#), Professor (adjunct in Neurosurgery), [Craig Birgfeld, MD](#), Associate Professor, and [Raymond Tse, MD](#), Assistant Professor. Each brings



Hopper



Gruss

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Birgfeld



Tse

their own area of specialization. In addition, other UW Plastic Surgeons come to SCH for specialized cases such as microvascular reconstruction, facial reanimation, and hand surgery.

The Plastic Surgery team provides evaluation and treatment for infants, children and teens with a wide spectrum of congenital and acquired problems. As in many areas of pediatrics, a team approach is used to treat patients. This is especially important when dealing with conditions that affect how children look and how their bodies work. Plastic surgeons are critical team members in the multidisciplinary [Craniofacial Center](#) and [Vascular Anomalies program](#).

Seattle Children's Craniofacial Center

The Craniofacial Center specializes in the treatment of cleft lip and palate, craniosynostosis, craniofacial microsomia and other complex craniofacial conditions.



Cunningham

Under the leadership of surgical director [Dr. Richard Hopper](#) and medical director [Dr. Michael Cunningham](#) the center has become one of the largest programs of its kind in the country. It is a large multidisciplinary effort with over 50 healthcare providers from 19 specialty areas providing diagnosis, medical and surgical treatment, and long-term management for children with craniofacial abnormalities. In 2012 the Craniofacial Center saw 3,207 patients and performed 584 surgical procedures. Surgical techniques developed by SCH craniofacial surgeons are revolutionizing the way craniofacial surgery is done all over the world. These innovative procedures enable doctors to address even the most serious and complex craniofacial abnormalities and provide the benefits of improved health and a more normal appearance for an increasing number of children. The publication, "Daily Parent" recently cited Seattle Children's Hospital as one of the nation's top 5 children's hospitals, and featured the Craniofacial Program as an example of the care provided here: <http://dailyparent.com/articles/the-nations-top-five-pediatric-hospitals/>.

Seattle Children's Transplant Surgery Program

[Seattle Children's Transplant Center](#) offers comprehensive evaluation and care to patients with end-stage diseases of the [heart](#), [liver](#), [kidneys](#) and [intestine](#) who may need an organ transplant. Surgical faculty in the Transplant Surgery program include: [Andre Dick, MD](#), Assistant Professor, [Patrick Healey, MD](#), Associate Professor and Pediatric Division Chief of Transplant Surgery (pictured on page 4); [Jorge D. Reyes, MD](#), Professor and Pediatric Transplant Program Director; as well as heart transplant surgeons, [D. Michael McMullan, MD](#) (pictured on page 5) and [Jonathan Chen, MD](#) (pictured on page 5).



Dick



Reyes

Seattle Children's has been a consistent leader among national pediatric transplant centers. To see outcomes of SCH's transplant program, follow this [outcomes](#) link. SCH's liver, heart and kidney transplant programs are among the best in the nation. The [intestine transplant program](#) is the only one of its kind in the Pacific Northwest. The Transplant Center has recruited top transplant specialists and continues to add innovative programs.



Dr. Andrew Dick

Photo credit: Brian Smale, Seattle Children's Hospital

Seattle Children's is the only provider of pediatric liver transplants in the region. The liver transplant team is led by [Dr. Patrick Healey](#). Dr. Healey is one of the few pediatric transplant surgeons with expertise in both transplant and pediatric

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Seattle Children's Hospital: Then and Now

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Dr. Jorge Reyes

Photo credit: Seattle Children's Hospital

surgery. He has performed more than 100 liver transplantations on children. [Dr. Jorge D. Reyes](#), Director of Transplant Services at Seattle Children's, is one of the most experienced pediatric liver transplant surgeons in the United States. He has performed 200 multi-organ transplantations and over 1,000 liver transplantations. Dr. Reyes is also one of the few surgeons in the world who performs living donor liver transplantations.

The heart transplant team is led by surgical director for heart transplant, [Dr. Michael McMullan](#) (pictured on page 5) and [Dr. Yuk Law](#), medical director for cardiac transplant and heart failure. Seattle Children's has performed over 100 pediatric heart transplants.

SCH is one of the top five kidney transplant centers in the United States, with excellent organ survival rates. For children with irreversible intestinal failure, the [Intestinal Care Program](#) is the only program in the Pacific Northwest – and one of only a few in the country – that has specialists who can perform intestine transplants. In fact, SCH's specialists have provided care for more children with intestinal failure than any other doctors in the nation.

Because Seattle Children's provides specialty care across a six-state region – Washington, Oregon, Alaska, Montana, Idaho and Hawaii – it is uniquely positioned to receive viable organs in a wider geographic area than many other children's hospitals. Providers in the Transplant Center are active with local, regional and national transplant groups. Our physicians maintain leadership positions with [United Network for Organ Sharing \(UNOS\)](#) committees and serve on the Organ Procurement Organization.



Dr. Kris Calhoun and Gus Pre-Op

Photo credit: Kris Calhoun, MD

Seattle Children's Hospital: A Saga of Help and Healing

Editor's Note: The following story is the first-hand account of one of the Department's "own," [Kristine Calhoun, MD](#), Associate Professor in the Division of General Surgery, Department of Surgery in the section of Surgical Oncology. Dr. Calhoun's primary area of clinical practice is breast cancer surgery, and she is regarded as a skilled surgeon, great teacher and compassionate physician to her patients. In June, 2013, she had a baby boy. Not only did this event turn her life upside down, in the normal ways a baby changes one's life, but she learned what it is like to be the mother of a critically ill patient. Kris also serves on the Editorial Board of Surgery Synopsis.

When she learned we would feature [Seattle Children's Hospital \(SCH\)](#) in this issue, she wondered if her story would help to illustrate what a great resource SCH is – even when you are a member of the Department. The rest of the Editorial Board quickly took her up on her offer.

\$1,083.51. That is the cost of a critical care ambulance ride from the [UWMC Neonatal Intensive Care Unit \(NICU\)](#) to the [Cardiac Intensive Care Unit \(CICU\)](#) at Seattle Children's Hospital (SCH). I know this because of events that happened following the birth of my son, August Theodore (Gus) on June 10, 2013.

As an "elderly pregnancy" and full-time surgeon, my risk of potential pregnancy complications was high, so I elected to have my OB care within the UW system. I wanted to be close to one of the premiere NICUs in the state. My pregnancy went smoothly, but the wisdom of my decision became very clear about 12 hours after I delivered Gus. An astute postpartum nurse took Gus for a quick "evaluation to check his oxygen saturation and make sure everything was ok." It was not OK. Gus's O₂ saturation was 85%. In hindsight, I should have seen that Gus was tachypenic, lethargic and had some perioral cyanosis, but in my sleep-deprived, new-parent state I didn't see anything wrong. The official diagnosis was that he was in cardiogenic shock secondary to critical aortic stenosis and a very abnormal mitral valve.

After initial resuscitation and a stat ECHO, transfer to the CICU at SCH via that very expensive ambulance was arranged. And so began an amazing saga of help and healing that is characteristic of the UW Medicine system, and in particular, in this case, Seattle Children's Hospital. The first 24 hours at Children's are a blur, but certain aspects definitely stand out: [Dr. Robert Sawin](#), Professor and Chief of Surgery at Seattle Children's Hospital, visited and despite the fact that he is a Pediatric General Surgeon and we were on the Cardiology Service, he gave me his cell phone and pager numbers and

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Seattle Children's Hospital: Then and Now

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Gus Calhoun in the SCH CICU Directly Post-Op
Photo credit: Kris Calhoun, MD

told me to call if I needed anything. [Dr. Patrick Javid](#), Assistant Professor of Surgery at SCH and the husband of my colleague [Dr. Sara Javid](#), also stopped by multiple times to visit and offer his assistance. When I had to choose a cardiologist, Patrick was instrumental in helping me make this important choice.

Gus was an inpatient for nearly three weeks, with one return trip to the CICU when he redeveloped cardiogenic shock. At last, he seemed to be ready to go home. He finally came off all supportive medications, was weaned off oxygen, learned how to eat and was discharged to home on June 28, 2013.

The next two months included frequent trips to SCH's Cardiology Clinic for follow up visits and ECHOs. You know you are using a clinic a lot when the greeters stop asking your name and greet you with your identity badge already made. Those little acts of courtesy and kindness mean a lot when your child is sick and you are a frequent visitor to what can be an unhappy place.

It was during an ECHO in August that [Dr. Tim McQuinn](#), the excellent cardiologist who takes care of Gus, observed that he was beginning to develop pulmonary hypertension due to significant mitral regurgitation. A cardiac catheterization and repeat aortic balloon valvuloplasty at the end of August confirmed systemic pulmonary hypertension. This meant it was time for us to meet the Pediatric Cardiac Surgeons ~ a little bit sooner than anticipated or hoped. It

turned out that Gus would need cardiac bypass surgery to replace the mitral and aortic valves.

For three months, I had been hearing about the new chief of Pediatric Cardiac Surgery who had been recruited to SCH from New York. Then I met him: [Jonathan Chen, MD](#), Chief of Pediatric Cardiovascular Surgery, and I understood all the accolades. Dr. McQuinn described him as good and fast, stressing the importance of speed in pediatric cardiac bypass cases. We were actually offered the opportunity to obtain opinions at Stanford or Boston Children's, but I elected to stay in Seattle. It did not make sense to me to leave home for surgery when I had the services of a premier pediatric cardiac surgery service less than 10 miles from my house. This was one of the wisest decisions I have ever made; one I will never regret.

Prior to our initial surgical visit, Dr. Chen, who is a gifted surgeon, but as important, a gifted communicator, was kind enough to call me at the end of a long day and preview his recommendations. He told me that Gus's case was complex due to two valves being abnormal and the presence of subaortic hypertrophy as well. He told me that Gus and treatment options had been discussed extensively at the cardiac multidisciplinary conference. He and I were able to have an honest discussion of the options and he ultimately recommended aortic valve replacement and mitral valve



Dr. Jonathan Chen and Gus—February 2014
Photo credit: Kris Calhoun, MD

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Seattle Children's Hospital: Then and Now

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repair or replacement based upon surgical findings. This recommendation was affirmed by Dr. McQuinn.

Following numerous ECHOs and other prognostic procedures, a date was picked to proceed. At that point, even though I was quoted a potential surgical mortality of 10-15%, I was relieved to finally have a concrete plan. Living from study to study, fixating on one aspect for two weeks, and then another for the next two weeks, is a challenging way to live. This experience certainly gave me a much better appreciation for what our patients often go through.

Gus had his surgery on September 17, 2013. He had a Ross-Konnos procedure, with his native pulmonary valve moved to the aortic position, the diseased aortic valve removed, and a new pulmonary valve placed. He then had the subaortic hypertrophy resected and the mitral valve replaced with a 15 mm mechanical St. Jude valve when the native valve was found to be beyond repair. Post-surgically, he was intubated for just over 24 hours, never paced, and out of CICU on postoperative day four. After initiation of anticoagulation, he was home on Coumadin and Lovenox postoperative day seven. The surgery quite honestly could not have gone better, and the ICU postoperative care was fantastic.

Maybe it was because of my surgical background and the fact that I understood pacers, chest tubes and incisions, but this final hospitalization was the easiest to deal with overall. I felt so comfortable with the care that Gus was receiving that I even felt confident sleeping at home; a major change from his earlier stays. I was always included in morning and evening rounds; my opinion of how he was doing was

The great examples of care and professionalism I saw from a different vantage point have made me a better surgeon and caregiver to my patients. I have learned that it is important to call my patients when I promise to call them; surgical skill and excellent decision making are important, certainly, but communication with patients and families is an equally important aspect of good patient care.

—Kristine Calhoun, MD



Gus Calhoun—January 2014

Photo credit: Kris Calhoun, MD

actively sought; and my questions always answered. I saw Dr. Chen and the rest of the surgical team daily and felt that they were attentive to Gus at all times. Finally, even though he was not on service at the time, Dr. McQuinn stopped by daily and had obviously been following Gus's progress. The great examples of care and professionalism I saw from a different vantage point have made me a better surgeon and caregiver to my patients. I have learned that it is important to call my patients when I promise to call them; surgical skill and excellent decision making are important, certainly, but communication with patients and families is an equally important aspect of good patient care.

With the exception of the ongoing Coumadin therapy, which is quite challenging and has allowed us to get to know the lab techs by name, and the fact that Gus will need surgery in the future to replace the mitral valve as he grows, the surgery is an unmitigated success. I am so grateful to everyone we have encountered. The hardest part to deal with was the scar, as it was the first mark on a pristine three month old body, but even that looks good now and is starting to fade nicely.

I would have preferred to have met Dr. Chen at the holiday party instead of in a consult room, but I am so happy with my decision to have Gus treated at Seattle Children's. I have never doubted my decision to remain here for surgery. From the cafeteria workers, to the nurses, the cardiologists, the lab

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Seattle Children's Hospital: Then and Now

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workers, the greeters, the intensivists, to the pediatric general and cardiac surgeons, it is quite evident that the purpose and goal of everyone, every day is to help sick children and their families. We are fortunate to have in SCH one of the best children's hospitals in the nation. And I am blessed to have my now healthy and thriving 21 pound, seven month old baby boy. I will never be able to adequately thank everyone who has cared for Gus, but I have tried! Seattle Children's Hospital truly is a place where miracles happen, and one of them is named August Calhoun.

Author's note: This article mainly focuses on the treasure that is Seattle Children's, but I would be remiss if I failed to mention fantastic individuals at UWMC who were there during this whole experience: My OB doctor, [Dr. Vicky Mendiratta](#), nearly missed her own daughter's piano recital to see me through delivery. This was fortunate due to the occurrence of shoulder dystocia. One of my colleagues in surgical oncology, [Dr. Gary Mann](#), was Gus's very first visitor. Once the gravity of his clinical situation became apparent, Dr. Sara Javid, another of my surgical oncology colleagues, engaged her husband Patrick Javid, one of the pediatric surgeons at SCH, to help answer questions. [Dr. David Byrd](#), my Section Chief, came to the UWMC NICU to escort me to my car. And finally, once transfer became imminent, [Dr. Carlos Pellegrini](#) personally contacted Dr. Sawin at Children's to explain the situation and our impending arrival in order to make the transition as smooth as possible. Even though I work in a high-tech, large academic medical center, I also work where I feel like I have a family. The people of the UW Department of Surgery truly make this a remarkable place.

Training Future Pediatric Surgeons at Seattle Children's Hospital

Editor's Note: [Kenneth Gow, MD](#), Associate Professor is the Associate Program Director of the General Surgical Residency Program (pictured on page 4). This is a thumbnail sketch of the work he does to advance training at SCH.

Dr. Gow directs the education of surgery residents and students that rotate on Pediatric General Surgery. This includes 26 UW R1's, 13 UW R3's, 3 Swedish R2's, and 5 VM R3's. Medical students have two elective rotations that he supervises: one inpatient, the other outpatient/clinic experience.

The goal is to optimize the educational experience for all trainees that rotate here. To that end, our work includes evaluating and updating goals and objectives, creating meaningful orientation packages, producing goal oriented self-education units, creating educational "sit-down Professor rounds" with trainees, setting up mentorship for each trainee and creating feedback sessions (including exit interviews). This is a work in progress, but meaningful improvements in the educational mission at SCH have been made.

Editor's Note: [Daniel Ledbetter, MD](#), Associate Professor (pictured on page 4) is a faculty member of the UW School of Medicine's innovative "Colleges" program. He is on the faculty of "Big Sky" College.

The UWSOM Colleges Program combines a clinical skills and professionalism curriculum with a mentoring program to train compassionate, expert physicians to practice outstanding patient-centered care. The Colleges are an academic and administrative structure with three primary goals:

- Oversee a four-year integrated curriculum of clinical skills and professionalism;
- Teach the Introduction to Clinical Medicine II (ICM II) course in the second year; and
- Provide a consistent faculty mentor/advisor to each student over his/her medical school career.

Dr. Ledbetter is one of only a few surgeons that are on the faculty of these colleges. Another of the Department's surgeons, [Dr. Hugh Foy](#), is the Director of the "Wind River" College. For more information about the Colleges Program, visit its website at [UW Medicine MD Program Colleges](#).



Foy

Pediatric Surgical Training Programs – at the Crossroads

Editor's Note: [Dr. John Waldhausen](#), Professor and Chief of Pediatric General/Thoracic Surgery (pictured on page 5), is also the Program Director for SCH's Pediatric Surgery Fellowship Program. Dr. Waldhausen sits on a number of national training committees and boards which provide him a unique perspective regarding the current challenges facing pediatric surgery training programs nationally.



As a program director of SCH's Surgical Training Program, President of the Association of Pediatric Surgery Training Program Directors (APSTPD) and a member of the [Pediatric Surgery Board of the American Board of Surgery \(ABS\)](#), it is a real privilege to work with fellows and faculty dedicated to our specialty who are excited to improve the surgical care of children.

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Seattle Children's Hospital: Then and Now

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Pediatric Surgery remains primarily a clinical specialty with a two-year clinical fellowship. SCH has a highly competitive program. Every year over 75 candidates are evaluated for one SCH Fellowship position. Nationwide less than 50% of candidates match each year.

In the US and Canada there are now over 53 training programs. While this may sound encouraging for the applicant, in reality we are reaching a crossroads for pediatric surgery as a specialty. Depending upon one's point of view, either too many pediatric surgeons are being trained or we are facing a shortage of trainees. The concern is that as more training programs become available, issues of competency and experience become increasingly important. Some of the programs do reach requirements set by the [ACGME](#) Residency Review Committee (RRC) in order to have a program, but may see few of the important index cases. The trainees in these programs may not get adequate experience to competently practice on their own.

Job opportunities for our trainees are changing with positions in high volume centers becoming more scarce, while large parts of rural America may lack a pediatric surgeon altogether. States like Wyoming and Montana lack the pediatric surgeons required to do routine pediatric surgical cases such as hernias, appendectomies and pyloromyotomies. However, a pediatric surgeon in this situation may only see one Wilms tumor or esophageal atresia each year. It would be difficult for pediatric surgeons in this situation to remain competent in all aspects of pediatric surgery.

This leads to questions about how to mitigate these concerns. Should there be increased regionalization of care? Should better ways be found to expose general surgery trainees in rural surgery tracks to pediatric surgery so that they can do common or unexceptional cases? Those are two possible ways to approach this issue.

Discussions posing these questions are currently underway between the RRC, [American Board of Surgery \(ABS\)](#), [American Pediatric Surgical Association \(APSA\)](#) and the Association of Pediatric Surgery Training Program Directors (APSTPD). These bodies have been charged to look at manpower and training issues in order to provide trainees with the training they need to in order for them to provide competent pediatric surgical care for our young patients - regardless of where they may live.

Seattle Children's Hospital Surgical Fellowships Seattle Children's has several highly sought after surgical fellowships. You can learn more about them by following the links. They include:

- Pediatric General Surgery Fellowship - Program Director: [John Waldhausen, MD](#)
<http://www.seattlechildrens.org/healthcare-professionals/education/gme/pediatric-surgery-fellowship/>
- Congenital Cardiac Surgery Fellowship - Program Director: [Lester Permut, MD](#)
<http://www.seattlechildrens.org/healthcare-professionals/education/gme/congenital-cardiac-surgery/>
- Craniofacial Surgery Fellowship - Program Director: [Richard Hopper, MD](#)
<http://www.seattlechildrens.org/healthcare-professionals/education/gme/craniofacial-surgery-fellowship/>

Google Glass: Exploring New Technology for Surgeons and Patients

[Heather Evans, MD, MS, FACS](#) is Assistant Professor of Surgery at the University of Washington. Based at [Harborview Medical Center](#), Dr.

Evans serves as a trauma/general surgeon and surgical intensivist. Her research focuses on leveraging technology to improve early detection and treatment of healthcare

associated infections. In a guest blog for the [Association for Academic Surgery](#), she recalls her recent selection to be one of the first surgeons to use Google Glass, a lightweight, wearable computer with hands-free controls; "I first heard about Google Glass in February [2013], [when Google launched a clever marketing strategy: a contest called #ifihadglass](#). To my astonishment, [my entry in 140 characters](#) was one of about 8,000 selected and I became a Glass Explorer."

Read her entire blog post at <http://www.aasurg.org/blog/ok-glass-take-picture/>. Her experience with Google Glass has also been written about in the *Seattle Times* (http://seattletimes.com/html/localnews/2022282502_googleglassurgeryxml.html), and she will discuss the use of Google Glass in surgery next month in the [final session of UW Mini-Medical School](#).



Evans



Dr. Evans is on the forefront of these technologies, as she strongly believes that physicians need to lend their knowledge of current process of care to guide an honest evaluation of novel technologies. "It is our responsibility as surgeons to critically consider the positive impact of Glass through enhanced communication, documentation and decision support, while weighing the potential risks of implementation to security, privacy and clinical outcomes."