Dear colleagues, parents and friends,

I am so proud of the outstanding work the Texas Children’s Department of Surgery performs every day to give our patients and their families the best chance at a bright and healthy future.

As the largest comprehensive team of pediatric surgeons in the United States, we complete more than 33,100 operating room cases and more than 228,400 clinic visits each year. Our complement of services allows us to treat the full spectrum of ailments facing our pediatric patients – from the simplest to the most complex.

The past year has seen many achievements and milestones – including the opening of the Lester and Sue Smith Legacy Tower, our 640,000-square-foot expansion and the new home for Texas Children’s Heart Center®, surgery and critical care at Texas Children’s. We’ve also named several new chiefs of service, continued our focus on enhanced access to care and reached beyond Houston – including opening facilities in Austin and internationally via the Global Surgery Program.

Operating on children can be a mentally and physically tasking experience, and we are dedicated to supporting each other and building a strong sense of team and togetherness as a Department of Surgery. We aim to cultivate surgeons who are not only gifted, but who fully understand the weight and incredible opportunity of their occupation. Because every day we get the gift of seeing hope, miracles and life-changing moments play out in our patients’ lives, and that’s something not everyone can say.

I hope you enjoy reading about our outstanding team and their commitment to surgical excellence. I am truly privileged to work with these dedicated surgeons and our passionate, committed and talented colleagues.

With respect and gratitude,

Larry H. Hollier Jr., M.D., F.A.C.S.
Surgeon-in-Chief
Texas Children’s Hospital
The Department of Surgery at Texas Children’s Hospital represents more than 120 pediatric surgeons, 135 advanced practice providers and 800 staff members dedicated to caring for and improving the health of children through patient care, education and research.
With a staff of more than 14,000 employees and 2,000 physicians, pediatric subspecialists, pediatric surgical subspecialists and dentists, Texas Children’s offers more than 40 subspecialties, programs and services.

Texas Children’s Hospital is one of the nation’s largest and most comprehensive pediatric health organizations, with more than 4.3 million patient encounters in 2018.

Texas Children’s Hospital is proud to consistently be recognized as a leader in pediatric care, ranking fourth among the nearly 200 pediatric centers surveyed by *U.S. News & World Report* in their 2018-19 edition of Best Children’s Hospitals. Texas Children’s is the highest ranked pediatric hospital in the south, and the only pediatric hospital in Texas on *U.S. News & World Report*’s Honor Roll of top ranked overall children’s hospitals.

This year, Texas Children’s Hospital was ranked as the best place in the country for Cardiology/Heart Surgery and Pulmonology and had an impressive six subspecialties ranked in the top five:

- #1 Cardiology and Heart Surgery
- #1 Pulmonology
- #3 Nephrology
- #3 Neurology and Neurosurgery
- #4 Gastroenterology and GI Surgery
- #4 Urology

Texas Children’s Hospital is located near downtown Houston in the Texas Medical Center, the largest medical center in the world. This campus includes nearly 680 licensed inpatient beds; the Mark A. Wallace Tower for outpatient visits; the Feigin Tower for pediatric research; Texas Children’s® Pavilion for Women, a comprehensive OB/GYN facility with a focus on high-risk births; and the Texas Children’s Hospital® Jan and Dan Duncan Neurological Research Institute®, a basic research institute dedicated to solving childhood neurological diseases.

In 2018, our latest capital expansion project, the Lester and Sue Smith Legacy Tower, added 19 floors to an existing, six-floor base next to the Pavilion for Women to greatly increase capacity for critical and surgical care.

Additionally, two community hospitals, Texas Children’s Hospital® West Campus and Texas Children’s Hospital® The Woodlands, bring specialty pediatric care – including an additional 160 licensed acute and critical care beds, two 24/7 pediatric emergency centers, full-service surgical suites and more than 20 subspecialty clinics – to communities in west and north Houston with a rapidly expanding population of children.
Texas Children’s also operates Texas Children’s® Specialty Care, Texas Children’s® Urgent Care, Texas Children’s® Health Plan, the nation’s first health maintenance organization created just for children, and Texas Children’s Pediatrics®, the nation’s largest primary pediatric care network with over 50 practices throughout the Greater Houston community. Texas Children’s Health Plan offers STAR Kids, a Medicaid-managed, best practice care plan for children under the age of 21 with disabilities and complex medical needs, throughout the Greater Houston area.

In 2018, we expanded our care even further, all the way to the capital city of Austin. Our first year saw the opening of one Texas Children’s Specialty Care location, one Texas Children’s Urgent Care clinic and three Texas Children’s Pediatrics practices, making it easier than ever for families in and around Austin to access high quality, affordable pediatric care and services.

Today, Texas Children’s Hospital is one of the nation’s largest and most comprehensive specialty pediatric hospitals, with more than 4.3 million patient encounters in 2018.
The Department of Surgery at Texas Children’s Hospital is comprised of pediatric surgeons across nine surgical divisions: Congenital Heart Surgery, Dental, Neurosurgery, Ophthalmology, Orthopedics, Otolaryngology, Pediatric Surgery, Plastic Surgery and Urology. In conjunction with our partners in Anesthesiology, Pediatric and Adolescent Gynecology and Transplant Services, we have more than 120 surgeons, 135 advanced practice providers, and 800 employees dedicated to ensuring children get the surgical care they need.

Our team’s robust activities are reflected in the more than 33,100 operating room cases and over 228,400 clinic visits completed in 2018, the substantial external research funding obtained by our faculty and the many prestigious scholarly articles published and presentations given nationally and internationally by our team each year.

Operating room suites managed across the Texas Children’s system include:
• 25 at Texas Children’s Texas Medical Center campus, including the new Lester and Sue Smith Legacy Tower
• 6 at Texas Children’s Pavilion for Women
• 6 at Texas Children’s Hospital West Campus
• 4 at Texas Children’s Hospital The Woodlands

Most of the surgical suites are integrated with video, endoscopic, robotic or microscopic equipment. For specialized surgical interventions such as fetal, heart and transplant surgery, we offer highly customized equipment and operating rooms as well as specially trained support staff. When children are too sick to be moved to an operating or procedure room, a mobile team, which includes a fellowship-trained pediatric anesthesiologist, travels throughout the hospital to perform bedside procedures.
### DEPARTMENT OF SURGERY

#### in 2018

<table>
<thead>
<tr>
<th>Surgical Division</th>
<th>Clinic Visits</th>
<th>Operating Room Cases</th>
<th>Operating Room Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congenital Heart Surgery</td>
<td>1,519</td>
<td>956</td>
<td>6,068</td>
</tr>
<tr>
<td>Dental</td>
<td>3,792</td>
<td>1,243</td>
<td>1,780</td>
</tr>
<tr>
<td>Neurosurgery</td>
<td>7,740</td>
<td>1,129</td>
<td>4,296</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>36,025</td>
<td>1,598</td>
<td>1,601</td>
</tr>
<tr>
<td>Orthopedics</td>
<td>62,344</td>
<td>3,517</td>
<td>8,679</td>
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<tr>
<td>Otolaryngology</td>
<td>56,051</td>
<td>13,530</td>
<td>9,825</td>
</tr>
<tr>
<td>Pediatric and Adolescent Gynecology*</td>
<td>11,230</td>
<td>321</td>
<td>621</td>
</tr>
<tr>
<td>Pediatric Surgery</td>
<td>13,513</td>
<td>6,331</td>
<td>10,210</td>
</tr>
<tr>
<td>Plastic Surgery</td>
<td>16,683</td>
<td>1,667</td>
<td>3,098</td>
</tr>
<tr>
<td>Urology</td>
<td>19,579</td>
<td>2,839</td>
<td>4,452</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>228,476</strong></td>
<td><strong>33,131</strong></td>
<td><strong>50,630</strong></td>
</tr>
</tbody>
</table>

Operating room cases are defined as cases when operating room staff and supplies are used. Cases with multiple procedures count as one case and are attributed to the service line of the primary surgeon. Operating room case volumes include procedures performed by Texas Children’s Hospital, Baylor College of Medicine and private practice physicians at Texas Children’s Hospital locations. Clinic visits include outpatient visits by Texas Children’s Hospital and Baylor College of Medicine faculty only.

*Pediatric and Adolescent Gynecology is a division of Obstetrics and Gynecology.

### DEPARTMENT OF SURGERY

#### by year

<table>
<thead>
<tr>
<th>Year</th>
<th>Clinic Visits</th>
<th>Operating Room Cases</th>
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</thead>
<tbody>
<tr>
<td>2014</td>
<td>137,830</td>
<td>25,399</td>
</tr>
<tr>
<td>2015</td>
<td>148,050</td>
<td>26,771</td>
</tr>
<tr>
<td>2016</td>
<td>166,124</td>
<td>27,6446</td>
</tr>
<tr>
<td>2017</td>
<td>198,256</td>
<td>30,111</td>
</tr>
<tr>
<td>2018</td>
<td>228,476</td>
<td>33,131</td>
</tr>
</tbody>
</table>
The Department of Surgery at Texas Children’s Hospital has a robust offering of surgical and clinical services and is able to address the full spectrum of pediatric health conditions from the simplest to the rarest and most complex. See below for a full list of programs, procedures and diagnoses across the department as well as the chiefs of service leading each division.

<table>
<thead>
<tr>
<th>Surgical Division</th>
<th>Programs/Procedures/Diagnoses</th>
<th>Chief of Service</th>
</tr>
</thead>
</table>
| **Congenital Heart Surgery** | • Aortic arch advancement  
• Aortic valve stenosis repair  
• Arterial switch operation  
• Atrial septal defect and ventricular septal defect closures  
• Atrioventricular canal defect repair  
• Blalock-Taussig shunt  
• Coarctation of the aorta repair  
• Double-switch procedure  
• Fontan procedure  
• Glenn procedure  
• Heart and lung transplants  
• Norwood operation  
• Patent ductus arteriosus ligation  
• Rastelli procedure  
• Repair of Ebstein’s anomaly  
• Repair of anomalous coronary artery  
• Ross procedure  
• Tetralogy of Fallot repair  
• Transposition of great arteries repair  
• Ventricular assist device implantation | Dr. Christopher Caldarone |
| Dental                    | Comprehensive dental care for special needs and medically complex patients                     | Dr. Esther Yang          |
| Neurosurgery              | • Craniofacial surgery  
• Epilepsy surgery  
• Fetal surgery  
• Hydrocephalus and endoscopic surgery  
• Minimally invasive pediatric neurosurgery  
• Movement disorder surgery  
• Neuro-oncology brain and spinal tumor surgery  
• Spinal surgery  
• Vascular neurosurgery | Dr. Howard Weiner |
| Ophthalmology             | • Corneal diseases  
• Craniofacial abnormalities  
• Droopy eyelids (ptosis)  
• Glaucoma  
• Neurologic eye disorders  
• Ophthalmologic plastic surgery  
• Orbital problems  
• Pediatric cataracts  
• Retinoblastoma  
• Retinal surgery  
• Retinopathy of prematurity  
• Strabismus (eye misalignment in children and adults)  
• Tear duct obstructions (blocked tear duct) | Dr. David Coats |
<table>
<thead>
<tr>
<th>Surgical Division</th>
<th>Programs/Procedures/Diagnoses</th>
<th>Chief of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orthopedics</td>
<td>• Cerebral palsy&lt;br&gt;• Club foot&lt;br&gt;• Fracture&lt;br&gt;• Hip preservation&lt;br&gt;• Limb deformity and reconstruction&lt;br&gt;• Orthopedic oncology&lt;br&gt;• Skeletal dysplasia&lt;br&gt;• Spina bifida&lt;br&gt;• Spine deformity and scoliosis&lt;br&gt;• Sports medicine</td>
<td>Dr. Brian Smith</td>
</tr>
<tr>
<td>Otolaryngology</td>
<td>• Aerodigestive&lt;br&gt;• Audiology&lt;br&gt;• Cochlear implants&lt;br&gt;• Down syndrome&lt;br&gt;• Ear and hearing center&lt;br&gt;• Head and neck surgical oncology&lt;br&gt;• Microtia and atresia&lt;br&gt;• Neurotology&lt;br&gt;• Speech, language and learning&lt;br&gt;• Swallow and dysphasia&lt;br&gt;• Tracheostomy&lt;br&gt;• Vascular anomalies&lt;br&gt;• Voice clinic</td>
<td>Dr. Anna Messner</td>
</tr>
<tr>
<td>Pediatric and Adolescent Gynecology*</td>
<td>• Colorectal and pelvic health&lt;br&gt;• Gender medicine&lt;br&gt;• Oncofertility&lt;br&gt;• Young women’s bleeding disorders</td>
<td>Dr. Jennifer Dietrich</td>
</tr>
<tr>
<td>Pediatric Surgery</td>
<td>• Adolescent bariatric surgery&lt;br&gt;• Colorectal and pelvic health&lt;br&gt;• Fetal surgery at Texas Children’s Fetal Center®&lt;br&gt;• Inflammatory bowel disease&lt;br&gt;• Pectus&lt;br&gt;• Robotic surgery&lt;br&gt;• Surgical oncology&lt;br&gt;• Thyroid surgery&lt;br&gt;• Trauma&lt;br&gt;• Vascular anomalies</td>
<td>Dr. Allen Milewicz (interim)</td>
</tr>
<tr>
<td>Plastic Surgery</td>
<td>• Brachial plexus&lt;br&gt;• Breast&lt;br&gt;• Cleft lip and palate&lt;br&gt;• Craniofacial/craniosynostosis&lt;br&gt;• Hand&lt;br&gt;• Vascular anomalies</td>
<td>Dr. Edward Buchanan</td>
</tr>
<tr>
<td>Urology</td>
<td>• Circumcision&lt;br&gt;• Colorectal and pelvic health&lt;br&gt;• Gender medicine&lt;br&gt;• Kidney stone&lt;br&gt;• Robotic surgery&lt;br&gt;• Spina bifida&lt;br&gt;• Urodynamics&lt;br&gt;• Urology transition medicine&lt;br&gt;• Voiding dysfunction</td>
<td>Dr. Paul Austin</td>
</tr>
</tbody>
</table>

* Pediatric and Adolescent Gynecology is a division of Obstetrics and Gynecology.
TEXAS CHILDREN’S HOSPITAL WEST CAMPUS

Texas Children’s Hospital West Campus is Houston’s first community hospital designed, built and staffed to exclusively care for children. The facility incorporates best practices in pediatric treatment and serves the West Houston community as the premier resource for children’s health. The Department of Surgery offers single-visit surgery services for West Campus Otolaryngology, Plastic Surgery, Hand Surgery, Ophthalmology and Pediatric Surgery patients to ensure their surgical needs are met in the most convenient way possible.

Single-Visit Surgery Program continues to grow

The Single-Visit Surgery Program combines the preoperative clinic evaluation and surgical procedure into one convenient hospital visit. Patients with straightforward surgical problems can be assessed in clinic and have their surgery on the same day, with the same results as if the child had had a preoperative visit.

Not only is single-visit surgery a benefit for our patients and families, but it also helps Texas Children’s provide world-class care for even more patients.

The Single-Visit Surgery Program at Texas Children’s West Campus includes:
- Hand Surgery (finger fractures, polydactaly, trigger thumb/finger)
- Pediatric Surgery (epigastric hernia, hydrocele, inguinal hernia and umbilical hernia)
- Ophthalmology (chalazion and nasolacrimal duct obstruction)
- Otolaryngology (ear tubes)
- Plastic Surgery (keloid removal/revision, mole/ nevus removal, scar removal/revision and skin lesions or cysts)

Orthopedics and Sports Medicine in the community

The Orthopedics and Sports Medicine Programs at Texas Children’s Hospital West Campus and Texas Children’s Hospital The Woodlands provide a comprehensive array of services to appropriately care for and treat acute and chronic sports injuries, concussions, exercise-induced asthma and other conditions affecting sports performance. Services include: primary care sports medicine, sports orthopedic surgery, sports nutrition, sports physical therapy, musculoskeletal radiology, sports concussion and sports performance enhancement.

To learn more about this program, please visit texaschildrens.org/singlevisit.

Dr. Allen Milewicz is the chief surgical officer at Texas Children’s Hospital West Campus. For more information, please visit texaschildrens.org/westcampus.
## TEXAS CHILDREN’S HOSPITAL WEST CAMPUS

in 2018

<table>
<thead>
<tr>
<th>Surgical Division</th>
<th>Clinic Visits</th>
<th>Operating Room Cases</th>
<th>Operating Room Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental</td>
<td>N/A</td>
<td>438</td>
<td>655</td>
</tr>
<tr>
<td>Neurosurgery</td>
<td>203</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>5,288</td>
<td>207</td>
<td>158</td>
</tr>
<tr>
<td>Orthopedics</td>
<td>14,162</td>
<td>1,076</td>
<td>2,255</td>
</tr>
<tr>
<td>Otolaryngology</td>
<td>11,215</td>
<td>3,344</td>
<td>1,994</td>
</tr>
<tr>
<td>Pediatric and Adolescent Gynecology</td>
<td>2,632</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Pediatric Surgery</td>
<td>2,402</td>
<td>1,253</td>
<td>1,155</td>
</tr>
<tr>
<td>Plastic Surgery</td>
<td>3,449</td>
<td>320</td>
<td>287</td>
</tr>
<tr>
<td>Urology</td>
<td>3,249</td>
<td>438</td>
<td>529</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>42,600</strong></td>
<td><strong>7,076</strong></td>
<td><strong>7,033</strong></td>
</tr>
</tbody>
</table>

Operating room case volumes include procedures performed by Texas Children’s Hospital, Baylor College of Medicine and private practice physicians at Texas Children’s Hospital West Campus. Clinic visits include outpatient visits by Texas Children’s Hospital and Baylor College of Medicine faculty only.

As Greater Houston’s first suburban hospital designed exclusively for children, Texas Children’s Hospital West Campus offers the expert care you’ve come to trust coupled with a location that’s convenient and accessible for area families.
TEXAS CHILDREN’S HOSPITAL THE WOODLANDS

Texas Children’s Hospital The Woodlands celebrated its grand opening in April 2017. The 548,000-square-foot, state-of-the-art facility is the area’s first freestanding pediatric hospital, and the second community hospital location for Texas Children’s. As the only dedicated pediatric hospital in North Houston, Texas Children’s Hospital The Woodlands serves children and families in the fast-growing communities of The Woodlands, Kingwood, Conroe, Spring, Magnolia, Humble and surrounding areas.

The hospital features 25 emergency center rooms, 12 radiology rooms, four operating rooms and 74 inpatient care beds including pediatric and neonatal intensive care. There is also a neurophysiology sleep lab, EEG, infusion center and human performance center for motion and gait analysis.

Specialty surgery programs focus on The Woodlands

As the demand for surgical services expands past the Texas Medical Center, Texas Children’s Hospital The Woodlands is able to meet that demand and become a central hub for growing programs including spine surgery (Orthopedics) and bariatric surgery (Pediatric Surgery).

It is our mission to provide care and services in the safest, most convenient way possible. With increased surgical capacity, we are able to schedule patients in a timely fashion and offer world-class surgical care. Bringing more complex procedures out of the Texas Medical Center and closer to home for thousands of our patients and families is, and will continue to be, a central focus for our team.

Dr. Jeffrey Shilt is the chief surgical officer at Texas Children’s Hospital The Woodlands. For more information, please visit texaschildrens.org/woodlands.

At Texas Children’s Hospital The Woodlands, we’re bringing expert pediatric care closer than ever before. From asthma and allergies to sports medicine and speech therapy, we’re here to serve you with more than 20 specialty clinics.
### TEXAS CHILDREN’S HOSPITAL THE WOODLANDS

*in 2018*

<table>
<thead>
<tr>
<th>Surgical Division</th>
<th>Clinic Visits</th>
<th>Operating Room Cases</th>
<th>Operating Room Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congenital Heart Surgery</td>
<td>N/A</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Neurosurgery</td>
<td>89</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>4,787</td>
<td>124</td>
<td>91</td>
</tr>
<tr>
<td>Orthopedics</td>
<td>14,552</td>
<td>810</td>
<td>1,433</td>
</tr>
<tr>
<td>Otolaryngology</td>
<td>11,509</td>
<td>3,766</td>
<td>1,728</td>
</tr>
<tr>
<td>Pediatric and Adolescent Gynecology</td>
<td>2,717</td>
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<td>132</td>
</tr>
<tr>
<td>Pediatric Surgery</td>
<td>2,606</td>
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<td>1,277</td>
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<tr>
<td>Plastic Surgery</td>
<td>1,939</td>
<td>249</td>
<td>372</td>
</tr>
<tr>
<td>Urology</td>
<td>3,367</td>
<td>621</td>
<td>569</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>41,566</strong></td>
<td><strong>6,783</strong></td>
<td><strong>5,612</strong></td>
</tr>
</tbody>
</table>

Operating room case volumes include procedures performed by Texas Children’s Hospital, Baylor College of Medicine and private practice physicians at Texas Children’s Hospital The Woodlands. Clinic visits include outpatient visits by Texas Children’s Hospital and Baylor College of Medicine faculty only.
Fully opened in September 2018, Texas Children’s new Lester and Sue Smith Legacy Tower adds over 640,000 square feet to meet the growing needs of our most critically ill patients.

The expansion includes:

• Six high-intensity surgical operating rooms used for complex neurosurgery, orthopedics, plastic surgery, transplant and pediatric surgery cases requiring large groups of multiple subspecialties

• Four floors of intensive care rooms:
  – 84 large, private rooms for increased comfort and functionality for patient families and the care team
  – Three pediatric intensive care floors
  – One transitional intensive care floor
  – Dedicated neurological and surgical beds

• Eight new floors for Texas Children’s Heart Center including four cardiovascular operating rooms, four cardiac catheterization labs, 48 private cardiovascular intensive care unit rooms, 42 acute care cardiology beds and 27 exam rooms

• An intraoperative MRI for enhanced imaging precision and visibility – including the most intricate and delicate neurosurgical cases requiring specially placed lasers and other technology

• Other features include:
  – A cardiac MRI within a cardiac catheterization lab
  – An inpatient physical therapy gym
  – Increased visibility into and between patient rooms for enhanced monitoring capabilities
  – A helistop, enabling the rapid transport of critically-ill patients
  – Dedicated family support space

**Expanding capacity for critical care**

A level I pediatric trauma center since 2010, Texas Children’s Hospital provides around-the-clock coverage to evaluate and treat the most severely injured pediatric patients. Averaging over 1,000 trauma admissions per year at our Texas Medical Center campus, teamwork is crucial in the rapid and decisive actions needed to treat traumatic injuries.

In 2018, the Texas Children’s Hospital system saw a total of 17,472 trauma patients across the emergency centers, 1,561 trauma patient admissions, and 127 trauma cases taken directly from the emergency center to the operating room. Our campus in the Texas Medical Center saw 1,125 trauma admissions admitted for greater than 24 hours.

Many of these trauma cases come from within the Metro Houston catchment area, which consists of nine counties covering more than 9,500 square miles. It is estimated, based on numbers reported to the Texas EMS Trauma Registry, that the Texas Children’s Hospital system sees approximately 50% of the injured patients within our catchment area.

In November 2018, Texas Children’s opened its first helistop in the Texas Medical Center, providing important access for children in outlying areas who need emergency care. Whether they’re being transported as part of a scene response for an auto accident or transferred from another hospital, we can now rapidly transport children and women here within a 150-mile radius. The helistop is the final element of Lester and Sue Smith Legacy Tower to go live and represents the culmination of a major expansion at our Texas Medical Center campus.
The helistop at Lester and Sue Smith Legacy Tower is the third helistop in the Texas Children’s system, with others in operation at Texas Children’s Hospital West Campus and Texas Children’s Hospital The Woodlands. The addition of the new helistop will facilitate the rapid transport of patients across all populations, including neonatal and maternal patients.

Before the helistop opening, Texas Children’s received roughly 150 helicopter transports a year, which landed at nearby partner institutions. Now with our own helistop, we’ll be able to offer our care to even more patients who need us.

Dr. Lara Shekerdemian is the chief of Critical Care. For more information about the department and our leadership, please visit texaschildrens.org/criticalcare.
The Dental Surgery Division provides a full range of routine and complex dental procedures for children with special needs or complex medical diagnoses.
Texas Children’s was proud to recently welcome several new service chiefs across the Department of Surgery – some joined from outside institutions, while others were promoted from within the Texas Children’s system. They include:

• **Dr. Christopher Caldarone, Congenital Heart Surgery**
  Caldarone is an internationally-recognized leader in congenital heart surgery and most recently served as surgeon-in-chief at The Hospital for Sick Children in Toronto. He joins Texas Children’s as the chief of Congenital Heart Surgery and professor of Congenital Heart Surgery at Baylor College of Medicine.

• **Dr. Anna Messner, Otolaryngology**
  Messner comes to Texas Children’s from Stanford University Medical Center, where she served as professor of Otolaryngology and Pediatrics and vice chair of the Department of Otolaryngology. She was also previously the chief of Pediatric Otolaryngology at Lucile Packard Children’s Hospital Stanford. Messner is also the president-elect of the American Society for Pediatric Otolaryngology.

• **Dr. Brian Smith, Orthopedics**
  Smith joins Texas Children’s as chief of Orthopedics after serving as professor in the Department of Orthopaedics and Rehabilitation at the Yale University School of Medicine in Connecticut, where he led the department for over 10 years.

• **Dr. Edward Buchanan, Plastic Surgery**
  Buchanan is an associate professor of surgery in the Plastic Surgery Division of the Michael E. DeBakey Department of Surgery at Baylor College of Medicine. He specializes in pediatric plastic surgery and craniofacial surgery. He is board certified with the American Board of Plastic Surgery and a fellow of the American College of Surgeons.

• **Dr. Esther Yang, Dental**
  Yang is a board-certified member of the American Board of Pediatric Dentistry, having received her dental training at New York University College of Dentistry where she concentrated her studies on pediatric and special needs patients. She provides focused dental care to pediatric patients with special needs including those who are medically compromised and those who have autism, cleft lip and palate and craniofacial abnormalities, among other conditions.

• **Dr. Paul Austin, Urology**
  Austin is a professor of surgery and the director of Pediatric Urology Basic Science at Baylor College of Medicine and serves as the director of Complex Urologic Reconstruction at Texas Children’s Hospital. He specializes in genitourinary reconstruction including hypospadias, neurogenic bladder, disorders of sexual development, exstrophy, vesicoureteral reflux, ureteropelvic junction obstruction, undescended testicles, hernias and hydroceles.
The Texas Children’s Hospital system prides itself on offering a multitude of locations in order to serve patient families right where they live. The system includes three hospital campuses, multiple specialty care practices, urgent care facilities and over 50 pediatric practices – proving Texas Children’s continues to make great strides in improving access to our patients and their families.

Enhancing access in all forms – not just with physical locations – has been an important initiative for the system in recent years, including providing a variety of different ways and means of contacting our providers and making it easier and faster to get a desired appointment. These options include:

• **Online scheduling**

  By visiting [texaschildrens.org/appointment](http://texaschildrens.org/appointment) patients will find several options for making appointments – via phone, via the My Chart Patient Portal (for established patients within a given service line) and online via our scheduling service provider, DocASAP (for new patients within a given service line). Texas Children’s is the only hospital in the U.S. News & World Report’s Honor Roll top five to offer online scheduling to patients.

• **Provider priority line**

  The Department of Surgery Provider Priority Line connects referring physicians and advanced practice providers to our on-call surgical attendings (for Neurosurgery, Ophthalmology, Orthopedics, Otolaryngology, Pediatric Surgery, Plastic Surgery and Urology) 24 hours a day, seven days a week. Urgent calls will be returned within 15 minutes, while non-urgent calls will be returned within three hours. Call **1-855-824-5437 (1-855-TCH-KIDS)** to access this phone line.

• **Single-visit surgery**

  Clinical appointments and outpatient surgical procedures performed on the same day at Texas Children’s Hospital Main Campus and Texas Children’s Hospital West Campus. Available for select procedures in Hand Surgery, Ophthalmology, Otolaryngology, Pediatric Surgery and Plastic Surgery. Call **832-227-2SVS (2787)** or visit [texaschildrens.org/singlevisit](http://texaschildrens.org/singlevisit) to make an appointment.
As part of our patient access initiative, Texas Children’s recently launched online scheduling in both English and Spanish that allows current patients, new patients and referred patients to schedule appointments via DocASAP, our online scheduling service provider. Texas Children’s is the only hospital of the top five on the U.S. News & World Report Honor Roll to offer real-time online scheduling.
TEXAS CHILDREN’S OPENS FIRST SPECIALTY CARE LOCATION IN AUSTIN

In October 2018, a new Texas Children’s Specialty Care opened in Austin, bringing specialized pediatric clinical and diagnostic care out of the hospital and into the community for the convenience of local families. The 26,000 square foot clinic has 30 exam rooms including five eye lanes. Specialties available currently are Allergy & Immunology, Cardiology, Ophthalmology, Plastic Surgery and Pulmonology. Specialties expected to be provided in the future include Dermatology, Endocrinology, Gastroenterology, Neurology and Urology. Visit texaschildrensspecialtycareaustin.org.
DIVISION OF GLOBAL SURGERY LAUNCHES

The Division of Global Surgery, created in August 2018, expands Texas Children’s ability to help children and women across the globe in low-resource countries and offers pediatric surgery education by providing hands-on instruction and necessary supplies.

To build capacity, preliminary Global Surgery efforts are focused on providing surgical care for pediatric cancer patients and leveraging resources, infrastructure and successful global medical programs already in place in sub-Saharan Africa including the Baylor International Pediatric AIDS Initiative Network, Texas Children’s Global HOPE℠ (Hematology/Oncology Pediatric Excellence) and existing efforts by Texas Children’s Department of OB/GYN.

Long-term goals for the division include opening a surgical facility for women and children in Lilongwe, Malawi; expanding care capacity in Central America; and becoming a leader in global surgical outreach.

A team of Texas Children’s surgeons, anesthesiologists and perioperative staff recently traveled to Malawi and Uganda to provide surgical care for children with cancer and congenital anomalies. Dr. Jed Nuchtern, chief of Global Surgery, Dr. Bindi Naik-Mathuria, pediatric surgeon and medical director of Trauma, Dr. Titi Aina, pediatric anesthesiologist, and operating room nurse Anita Hadley worked alongside local surgical teams to provide much-needed surgical care for local children, many of whom had been waiting months for experienced doctors and nurses who could treat their conditions.

The team helped complete more than 30 operations, including 10 nephrectomies for Wilm’s tumor, the most common form of pediatric kidney cancer, effectively providing a cure for these children.
The Plastic Surgery Division at Texas Children’s Hospital has nine full-time plastic surgeons, eight physician assistants and one nurse practitioner, making it the largest group of full-time pediatric plastic surgeons and providers at a children’s hospital in the United States. In 2018, Plastic Surgery launched several new programs and expanded one to meet a growing community need.

**FACIAL REANIMATION CLINIC**
The Facial Reanimation Clinic at Texas Children’s Hospital, one of the first-of-its-kind for children in the United States, specializes in the comprehensive clinical and surgical care of children with facial weakness, paralysis and asymmetry as a result of a congenital anomaly, traumatic injury or tumor resection. These conditions vary in severity and treatment ranges from simple Botox injections to complex, lengthy surgical interventions. The care of these patients requires a multidisciplinary team of coordinated subspecialists to ensure these intricate cases are successful. The team includes members from both Plastic Surgery and Physical Therapy.

**WOUND CARE CLINIC**
Texas Children’s Wound Care Clinic – one of only a few in the country, and the first and only one of its kind in Texas – provides comprehensive wound evaluation and treatment by an experienced, multidisciplinary team of dedicated medical, surgical, nursing and advanced practice providers.

The team uses evidence-based, standardized treatment protocols – which are under constant scientific scrutiny – to develop individualized treatment plans for each patient. These care plans take into account factors such as wound origin and location, as well as patient and family lifestyle, to determine the best approach to maintenance and prevention of future wounds. Additionally, data from each case is carefully analyzed with the dual goals of improving clinical processes and ensuring care protocols provide the best possible outcomes.

Experts in the Wound Care Clinic currently see patients from across the Texas Children’s system at our Texas Medical Center campus, providing high-quality care for a wide range of conditions, including animal bites, chronic/pressure wounds, fragile skin, soft tissue infections, skin injuries, trauma and more.

**BRACHIAL PLEXUS CLINIC**
The Brachial Plexus Program is a multidisciplinary clinic that specializes in the care of infants and children with brachial plexus injuries, which occurs when there is a stretch or sometimes a tear in a bundle of nerves known as the brachial plexus located near the neck and upper arm area.

Injury to these nerves may cause weakness, pain, sensory loss and functional impairment. These injuries may occur around the time of birth or from trauma related to falls, motor vehicle accidents or sports. Our team provides specialized care and treatment for:
- Acute flaccid myelitis
- Brachial plexopathy due to vascular issues of the upper extremity
- Brachial plexopathy or neuritis as a result of viral infections
- Brachial plexus birth palsies
- Parsonage Turner syndrome
- Traumatic brachial plexus injuries

Providers may refer to any of these programs by visiting texaschildrens.org/plasticsurgery.
The new Wound Care Clinic – one of only a few in the country, and the first and only one of its kind in Texas – is a comprehensive center where patients can have a variety of wounds evaluated including animal bites, chronic wounds, deep pressure ulcers, thermal skin injuries and much more.
FIRST IN U.S. TO IMPLANT VENTRICULAR ASSIST DEVICE DESIGNED FOR CHILDREN

A team of experts, led by congenital heart surgeon Dr. Iki Adachi, became the first in the United States – and only the second in the world – to implant the Jarvik 2015 ventricular assist device (VAD), a groundbreaking new technology Adachi helped develop to buy patients with heart failure valuable time until they can undergo transplant.

The Jarvik 2015 is the first and only implantable continuous-flow VAD designed specifically for small children. Development took more than a decade and was not without setbacks. After the previous prototype failed to gain FDA approval, the team of engineers enlisted Adachi to assist with crucial design modifications to the VAD's pump while keeping the size of the device small, about the size of an AA battery. Following extensive testing in the Texas Medical Center, the FDA approved the Jarvik 2015 for clinical trial.

One of the most significant benefits of this new technology is that it allows the patient to become stronger, making them a better candidate for transplant.

Such was the case with Katlyen Hickman, the four-year-old Texas Children’s Heart Center® patient born with complex congenital heart disease, including ventricular septal defects and small left heart structures, who became the first American patient to receive the device.

Katlyen’s condition had deteriorated so rapidly that Adachi petitioned the FDA for expanded access use to implant the device on Oct. 2, 2018. Not only did it stabilize Katlyen’s heart, it improved bloodflow to her visceral organs, dramatically improving her condition in the weeks leading up to her successful heart transplant, which occurred on Nov. 23, 2018.

The Jarvik 2015 is the only internal VAD designed for use in infants and small children. Prior to the Jarvik 2015, the only option available for a patient Katlyen’s size was an external VAD, which carries an increased risk of side effects, especially stroke.

The Jarvik 2015 is an investigational device in the United States. Its safety and effectiveness have not been established and are currently being evaluated under the PumpKIN trial.

CLINICAL RESEARCH PROGRAM LAUNCHES

Texas Children’s Surgical Research Unit provides services including study design, data management, research coordination, biostatistics and grant/budgeting assistance. The clinical research team includes a statistician, research assistant, medical writer and other staff members focused on translating basic research from the labs into treatments and protocols available to directly benefit patients.
Future goals for the program include increasing multicenter involvement, grant funding, publication productivity and nationally recognized clinical research.

**BASIC RESEARCH CONTINUES TO THRIVE**

The Basic Science Research Program was formalized this year under the Office of Surgical Research Administration, headed by Monica Fahrenholtz, Ph.D., and Hector Martinez-Valdez, M.D., Ph.D.

Development of a surgical laboratory in the Feigin Center continued in 2018, which will offer core facilities for all surgical basic science researchers. Numerous national presentations and publications were generated from this active group, and more than $25 million in federal and foundation research proposals were submitted in 2018, resulting in several multimillion dollar awards. These included:

- A second NIH R01 awarded to Dr. Sundeep Keswani, director of the Laboratory for Regenerative Tissue Repair, in collaboration with Dr. Jane Grande-Allen, chair of Bioengineering at Rice University, to investigate discrete sub-aortic stenosis.
- Dr. Sanjeev Vasudevan received a Cancer Prevention and Research Institute of Texas project grant in collaboration with the Oncology group at Baylor College of Medicine, in addition to obtaining several foundation awards.

These successes have been complemented by generous gifts by Amie and Jeff Springmeyer and Laura and Lew Moorman to continue the growth of surgical research. In a short three years, the basic science research group has established itself as one of the fastest growing and productive pediatric surgical research groups in the United States.

In fiscal year 2018, Texas Children’s Department of Surgery delivered over 300 presentations, contributed to over 600 publications and participated in almost 100 IRB protocols.

**SOUTHWEST PEDIATRIC DEVICE CONSORTIUM RECEIVES $6.75M FDA P50 GRANT TO EXPAND DEVELOPMENT OF MEDICAL DEVICES**

The Southwest National Pediatric Device Consortium (SWPDC), anchored by Texas Children’s Hospital and Baylor College of Medicine, recently received a prestigious P50 grant from the U.S. Food & Drug Administration (FDA). The five-year, $6.75M grant will begin in September 2019.

SWPDC supports pediatric device innovators with the goal of addressing the shortage of needed novel medical devices for children, a public health problem that has been acknowledged by the FDA. The consortium includes clinical, scientific/engineering, investment, regulatory and academic partners in the Texas Medical Center, the Greater Houston area, and the Southwestern U.S. The primary partners include Texas A&M University, Rice University, University of Houston and Fannin Innovation Studio, and includes others such as Biotex Inc., Children’s Hospital of San Antonio, Children’s Health in Dallas and Phoenix Children’s Hospital, with additional future sites.

SWPDC was selected as one of five national consortia that are addressing the shortage of pediatric devices by providing services in several areas: unmet needs assessment, prototype development, product and technology acceleration services, and business acceleration services. The SWPDC members will evaluate and support projects, as well as advise innovators throughout the total product life cycle.
DEPARTMENT OF SURGERY LEADERSHIP COURSE EMPOWERS PROVIDERS

In the fall of 2018, Department of Surgery leadership launched the Infinite Leadership Course, a new initiative aimed at fostering personal and professional development among surgical providers, and preparing the next generation of surgical leaders.

The six-month program embraces one of Texas Children’s cultural cornerstones – leadership – and takes it to a new level, with a curriculum specially developed to help surgeons and APPs recognize their potential and hone their leadership skills. The new academy underscores the Department of Surgery’s ongoing commitment to investing in its people.

Twenty inaugural participants kicked off the course by participating in monthly sessions designed to help build on leadership strengths. The curriculum includes lectures, reading assignments, coursework and group projects, developed to help each participant understand their personal vision and role as part of a team focused on innovating and improving.

Texas Children’s Breakthrough Communication – a course facilitated by providers and designed to equip surgeons, physicians and APPs with tools to improve patient satisfaction and enhance patient care – is also integrated into the academy’s coursework.

DEPARTMENT OF SURGERY INSIGHT SERIES LAUNCHES

In November, faculty and staff from Texas Children’s Department of Surgery and Perioperative Services gathered for the inaugural presentation of the Department of Surgery Insight Series.

The new quarterly series of inspirational lectures, given by well-known speakers, is intended to foster personal development within the department – inspiring the faculty and staff and teaching them new ways to approach their professional and personal lives.

The inaugural speaker was Dr. Ronan Tynan, a physician, multiple medal-winning and record-setting Paralympian, and member of the renowned singing group, The Irish Tenors, whose fascinating personal story of triumph in the face of adversity had the Texas Children’s audience transfixed.
Ronan Tynan – physician, medal-winning and record-setting Paralympian, and member of the renowned singing group, The Irish Tenors – shares his fascinating personal story of triumph in the face of adversity with the Department of Surgery faculty and staff.
YEAR OF CHANGE FOR TEXAS CHILDREN’S HEART CENTER®
Texas Children’s Heart Center saw big changes in 2018, including a new era of leadership and a move from Texas Children’s West Tower to the brand new Lester and Sue Smith Legacy Tower.

Two esteemed congenital heart surgeons joined the Texas Children’s Heart Center team in the fall of 2018 – Dr. Christopher Caldarone, chief of Congenital Heart Surgery, and Dr. E. Dean McKenzie, attending congenital heart surgeon.

Caldarone moved to Texas Children’s Hospital from the Hospital for Sick Children in Toronto where he served as the university chair of Cardiac Surgery (2009-2016) and as the surgeon-in-chief and chief of Perioperative Services (2015-2018).

McKenzie – a world-renowned leader in congenital heart surgery – was previously a member of the Texas Children’s Heart Center team for more than 15 years. Most recently, he served as chief of Pediatric Congenital Cardiothoracic Surgery at Children’s Healthcare of Atlanta, and professor and chair of the Division of Cardiothoracic Surgery at Emory University School of Medicine.

In September 2018, a specially-trained clinical team comprised of more than 200 members transported 64 heart patients, some critically ill, to their new, state-of-the-art rooms in Lester and Sue Smith Legacy Tower. The new space includes:
• Eight floors for Texas Children’s Heart Center including clinic space, offices and more
• Four cardiovascular operating rooms
• Four cardiac catheterization labs

MOST PEDIATRIC TRANSPLANTS IN THE NATION
Transplant teams at Texas Children’s Hospital performed 107 solid organ transplants in 2018, the most in the history of Texas Children’s Transplant Services. Totals for each organ were:
• 20 heart transplants
• 31 kidney transplants
• 12 lung transplants
• 44 liver transplants

Since its inception, Texas Children’s Transplant Services has grown at a steady pace and is now one of the largest pediatric transplant programs in the nation, with a total of almost 1,700 solid organ transplants performed. Dr. John Goss, medical director of Transplant Services, also performed his 2,000th liver transplant in 2018.

ANESTHESIOLOGY SUPPORT
Texas Children’s Department of Anesthesiology, Perioperative and Pain Medicine has 86 fellowship-trained pediatric anesthesiologists, making it one of the largest departments of its kind in the United States. The team also includes 41 pediatric certified registered nurse anesthetists, 27 advanced practice providers (including two physician assistants and 25 nurse practitioners), two sedationists, two Ph.D. pain psychologists and 10 pediatric nurse practitioners. In 2018, the pediatric team provided almost 50,000 anesthetics, ranging from simple outpatient procedures to complicated surgeries.
The team is responsible for covering over 50 different operating rooms, radiologic locations and clinics across the Texas Children’s system. The department also operates one of the leading fellowship programs in the United States, providing advanced training in general pediatric anesthesia and pediatric cardiovascular anesthesia, pediatric anesthesia education and research, and pediatric anesthesia quality and outcomes.

The teams within Anesthesiology include:
• Anesthesia Research
• Cardiovascular Anesthesiology
• Community Hospital Anesthesiology
• Critical Care Medicine
• General Anesthesiology
• Non-OR Anesthesiology
• Pain Medicine

Anesthesia for children, babies and fetuses requires specially designed equipment, and we use the latest technology, including advanced monitors and near-infrared spectroscopy, to measure brain oxygen levels. Our goal is for each child to have a safe experience, whether in the operating room or when having procedures and tests elsewhere in the hospital, such as bedside sedation in patient rooms.

Dr. Dean Andropoulos is the anesthesiologist-in-chief at Texas Children’s Hospital. For more information about the department and our leadership, please visit texaschildrens.org/anesthesia.

The Department of Anesthesiology, Perioperative and Pain Medicine complete nearly 50,000 anesthetic procedures each year across the Texas Children’s system.
Texas Children’s Department of Surgery provides care for children in the Greater Houston area and Austin and for children from all 50 states and over 60 countries around the globe.

To help meet the needs of our patients, we offer same-day surgical consultation appointments for each of the following surgical divisions: Congenital Heart Surgery, Neurosurgery, Ophthalmology, Orthopedics, Otolaryngology, Pediatric and Adolescent Gynecology, Pediatric Surgery, Plastic Surgery and Urology.

To make an appointment, call 832-TCH-APPT (832-824-2778).

Visit texaschildrens.org/refer for more information about referring a patient.

To learn more about the Department of Surgery, visit texaschildrens.org/surgery.

For additional appointment information or to speak with a division administrator, please call:

<table>
<thead>
<tr>
<th>Division</th>
<th>Phone Number</th>
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<tbody>
<tr>
<td>Congenital Heart Surgery</td>
<td>832-826-2030</td>
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<td>Dental</td>
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<td>Neurosurgery</td>
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<td>Orthopedics</td>
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<td>Otolaryngology</td>
<td>832-822-3250</td>
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<tr>
<td>Pediatric and Adolescent Gynecology*</td>
<td>832-822-3640</td>
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<td>Pediatric Surgery</td>
<td>832-822-3135</td>
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<tr>
<td>Plastic Surgery</td>
<td>832-822-3180</td>
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<tr>
<td>Urology</td>
<td>832-822-3160</td>
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</tbody>
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* Pediatric and Adolescent Gynecology is a division of Obstetrics and Gynecology.
In an effort to meet the growing needs of our most critically ill patients, we opened Lester and Sue Smith Legacy Tower in 2018 to be the new home for Texas Children’s Heart Center®, intensive care and surgery.
DEPARTMENT OF SURGERY LOCATIONS

1. Texas Children's Hospital
   The Woodlands
   17580 Interstate 45 South
   The Woodlands, TX 77384
   936-267-5000

2. Specialty Care
   Kingwood Glen
   19298 W. Lake Houston Pkwy.
   Humble, TX 77346
   - Specialty Care, Ste. 110
     281-812-0280
   - Outpatient Therapy, Ste. 220
     832-828-4900
   - Sports Therapy, Ste. 240
     832-828-4990

3. Specialty Care Cy-Fair
   11777 FM 1960 Rd. West
   Houston, TX 77065
   281-469-4688

4. Texas Children's Hospital
   West Campus
   18200 Katy Freeway
   Houston, TX 77094
   832-227-1000

5. Specialty Care
   Sugar Land
   15400 Southwest Freeway,
   Ste. 200
   Sugar Land, TX 77478
   281-494-7010

6. Texas Children's Hospital
   6701 Fannin St.
   Houston, TX 77030
   832-824-1000

7. Specialty Care
   Upper Kirby
   3023 Kirby Dr., Ste. 201
   Houston, TX 77098
   713-533-9016

8. Specialty Care
   Clear Lake
   940 Clear Lake City Blvd.,
   Ste. 200
   Webster, TX 77598
   281-282-1900

9. Specialty Care Bellaire
   6330 West Loop South,
   Ste. 300
   Bellaire, TX 77401
   713-839-0164

10. Specialty Care
    Eagle Springs
    5514 Atascocita Rd. Ste. 190
    Humble, TX 77346
    281-666-5006