



Children's Hospital Boston

Department of Plastic & Oral Surgery

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Children's Hospital Boston

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Chief's Letter

On behalf of Children's Hospital Boston's Department of Plastic & Oral Surgery, we are pleased to share our Department Brochure with you. Our surgeons and staff work hard to provide the highest quality care for patients and their families, and continuously look for ways to improve our services.

In accordance with this goal, the Department of Plastic Surgery has renovated its clinic space to better serve our patrons. The new clinic will positively impact the continuity of care for our patients with craniofacial anomalies, vascular anomalies, oral and maxillofacial needs and congenital hand defects. This collaboration allows for a synthesis of varying medical perspectives, improved medical care, surgical treatment and research endeavors.

We are excited to share our department brochure with you. We hope the information on the following pages reaffirms the reasons you chose Children's Department of Plastic & Oral Surgery, and we look forward to continuing our relationship with you in the future. Please do not hesitate to contact us to share your experiences and let us know how we can better serve you.



John G. Meara, MD, DMD
Plastic Surgeon-in-Chief



Bonnie L. Padwa, DMD, MD
Oral Surgeon-in-Chief



Craniofacial Anomalies

Craniofacial anomalies are a diverse group of deformities in the craniomaxillofacial region which can include:

- Cleft Lip and/or Cleft Palate
- Hemifacial Microsomia
- Single or Multi-Suture Craniosynostosis
- Treacher Collins and Nager Syndrome
- Beckwith-Weidemann Syndrome

The Craniofacial Anomalies Program provides an interdisciplinary approach to treating children and adolescents with congenital and acquired facial deformities. Each year, the team cares for more than 500 patients, 200 of which are new patients, making the program one of the busiest of its type in the country. Although many craniofacial anomalies can be detected through prenatal ultrasound, evaluation by our craniofacial geneticist and genetic testing helps establish the diagnosis. This information allows the team to provide new parents with treatment guidelines for their child. The Craniofacial Anomalies Program provides a wide range of services for patients with craniofacial deformities. Our interdisciplinary team develops treatment plans tailored to each child's needs.

Dumanel's Story

Dumanel was born in Coutan, a village in central Haiti. During his delivery, it was obvious there was something unusual about his face; instead of a flat piece of skin between his dark eyebrows, he had a swollen protrusion half the size of a tennis ball. Dumanel had an encephalocele, a rare neurological defect in which the bones of the skull don't close completely during development, creating a gap through which brain tissue can protrude.

For the first six months of his life, Dumanel and his father, Almane, traveled to several hospitals around Haiti. After months of searching, Almane was told to go to the town of Hinche, where a group of doctors from the United States, including Dr. John Meara, plastic surgeon-in-chief at Children's, were visiting with Operation Smile and Partners in Health (PIH). It was on Meara's second trip to Haiti that he met Dumanel and his father. Right away he knew that Dumanel's chances of receiving proper medical attention for his disorder in Haiti were scarce; the services needed were just not available. After many months and different hospitals, Dumanel was finally on his way to Boston.

The intensive surgery took a full day. It involved draining the cyst, removing the protruding brain matter from the encephalocele and repairing the defect in the skull. After waiting a little over two months to ensure there were no complications, the plastic surgeon gave word to Almane and Dumanel that they could go home. Since the surgery, Dumanel's motor skills have improved rapidly. Before, he could not crawl and his speech was impaired. Now, he is thriving and learning new things every day.

Cleft Lip and Palate

Cleft lip/palate is the 2nd most common birth defect in the United States.

- Affects approximately 1 in every 700 births annually
- Occurs less frequently among African-Americans
- More common in boys than girls
- Most babies born with cleft lip/palate are otherwise healthy with no other abnormalities

The Cleft Lip and Palate Program is internationally recognized for its care of children and adolescents with cleft lip and/or cleft palate. The interdisciplinary team includes plastic surgery, genetics, dentistry/orthodontics, speech and language, nursing and audiology. Through the Advanced Fetal Care Center, these diagnoses are made as early as twenty weeks gestation and expectant parents are introduced to our team prenatally. Treating more than 575 patients each year, our program is one of the largest of its kind in the country.

The Cogswells' Story

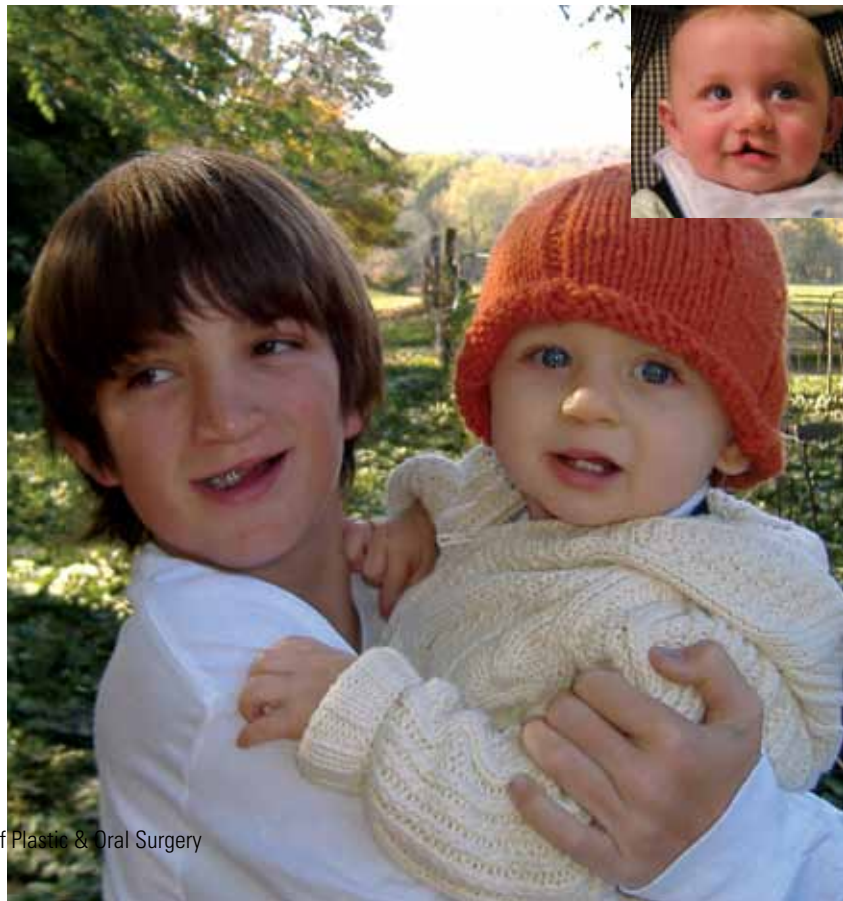
At 24 weeks pregnant, an ultrasound detected that our son, Jackson, would be born with a unilateral incomplete cleft lip and soft palate. When we learned of the cleft we were scared, nervous and felt every emotion in between. There was no family history of clefts and we felt I was very healthy throughout the pregnancy. We didn't understand why this was happening to us and to our first child.

Weeks later, Jackson was born. At 7lbs, 12oz, he had a perfectly round head of dark hair and amazing blue eyes. When I saw the cleft, I felt one tear roll down my cheek. I felt bad for our baby. The question was no longer "why us?" but "why him?"

As the days went by we learned how to feed him and soon discovered there would never be a pity party for Jackson. He would persevere and so would we. We would make the most of this situation, be teachers and learners, and an example for others. Jackson's smiles and love for life would get us through. And it did.

Though his lip was repaired at five months and his soft palate was repaired at 10 months, not a day goes by that we are not thankful for the work Children's has done. We are truly amazed at the way he looks and his contagious smile shows no sign of slowing. We are forever grateful to the staff at Children's for treating us like their own family, for giving us hope, and for reassuring us at each visit.

—Kyle, Lesley and
Jackson Cogswell



Vascular Anomalies

- Hemangiomas are the most common vascular birthmark
- They are classified by what type of vessels make up the malformation
- Nearly 50% of referred patients are misdiagnosed
- About 35% have received inappropriate treatment
- 15% of patients are difficult to diagnose and for 5% no prescription is available

Patients with vascular anomalies require the combined expertise of an experienced, interdisciplinary team of specialists. The Vascular Anomalies Center (VAC) at Children's gathers the largest of such teams anywhere. The VAC is regarded as the premier center for the treatment of individuals with vascular anomalies. Many vascular anomalies are present at birth or can appear later in childhood. Although some anomalies may go away in time, others do not regress and can grow as your child grows therefore proper examination is a must. Treatment for vascular malformations depends upon the type: medication, surgical debulking, surgical resection, sclerotherapy, embolization and laser photo coagulation are all potential options.



Parker's vascular tumor before removal



Parker's tumor removed, skin graft healed



Tissue expanders creating more skin



Parker's hair replaced

Parker's Story

This past year, a family traveled over a thousand miles to Boston after their five-year-old son developed a growth on his posterior scalp. It was a vascular anomaly, called kaposiform hemangioendothelioma (KHE), that was enlarging and threatening to involve his skull and underlying brain.

Treating the tumor would not be easy. Parker would need to endure the removal of a large part of his scalp to take out the tumor, followed by three major reconstructive procedures. After first removing the tumor, Dr. Arin Greene would need to use a skin graft by transferring skin from the boy's buttock and thigh to the skull where the tumor had previously been. Parker's journey was far from over. Once the skin graft was healed, he had two tissue expanders placed underneath his scalp in order to produce new scalp with hair.

Over the next several months these balloon-like expanders were filled each week with salt-water to produce new skin. After enough skin had been created, the skin graft and tissue expanders were removed. The hair he had lost when the tumor was removed was replaced, leaving little evidence that he had been affected by a serious tumor.

Oral and Maxillofacial Surgery

- Expertise in managing conditions in the oral cavity and craniofacial skeleton that are specific to children
- Care of pediatric patients with temporomandibular joint disorders
- Many procedures are done in the office with a team of providers that have expertise in managing children
- Provides intravenous conscious sedation for office procedures

The Oral and Maxillofacial Surgery Program cares for a wide range of pediatric oral and maxillofacial surgical diagnoses, including treatment of routine and complex problems. The team works in close collaboration with orthodontists to provide combined surgical and non-surgical orthodontic correction. Our group is also a leader in treatment of facial trauma and dentoalveolar infections and temporomandibular joint disorders (TMJ) in children.

Jim's Story

When Jim was born, his parents were dealt very difficult news. He had Treacher Collins syndrome, a rare genetic disorder that affects the head and face. With visible symptoms such as down-slanting eyes, underdeveloped or absent cheekbones, small lower jaw, underdeveloped or unusually formed ears and a possible cleft palate, Treacher Collins is easy to detect. It wasn't until Jim was three months old that his mother observed that he had difficulty sleeping and breathing, one of the characteristics of Treacher Collins that can go unnoticed for some time.

Jim's mother brought him to Children's for a sleep study which confirmed that he had obstructive sleep apnea. Shortly afterwards, he was admitted to the hospital and placed on continued positive airway pressure, or CPAP, to help maintain his airway during sleep. For Jim's parents, the news would get worse before it would get better. Unfortunately, this treatment could only be rendered while he was in the hospital and not at home. The equipment needs for a child his age were too complex; Jim would need to stay in the hospital.

An interdisciplinary team was assembled to discuss the best long-term treatment options for Jim. These included a tracheostomy (i.e. the surgical formation of an opening into the trachea through the neck to allow the passage of air) or mandibular distraction osteogenesis. His parents choose distraction osteogenesis. Jim was taken to the operating room. Through a one inch incision, a cut was made on each side of the jaw bone and distraction devices were placed. Although his parents would have to turn the device two millimeters a day for twelve days, it was a small price to pay. Jim stopped snoring and a repeat study confirmed he no longer had obstructive sleep apnea. Additionally, after the mandibular distraction osteogenesis, Jim no longer requires CPAP and will not need a tracheostomy.



Jim



Before distraction



After distraction

Facial Reanimation

- Facial nerve palsy can be congenital or acquired
- It can be isolated or associated with another condition
- When isolated, it usually affects only one side of the face
- When due to Moebius syndrome, it usually affects both sides of the face
- Acquired facial nerve palsy develops because of trauma, inflammation, infection, or after removal of tumors in the head or neck

The Facial Reanimation Program treats facial nerve paralysis and paresis due to congenital and traumatic conditions, palsy after tumor extirpation and Moebius syndrome. Diagnosis of this condition occurs shortly after birth as your child may have a lack of facial expression or facial muscle tone. In most cases, it affects the eye and the mouth. Your child may have trouble blinking, smiling, sucking and chewing. Static slings and functional muscle transfers are available for restoration of smile and oral competence. If physical therapy is not enough to correct the problem, microscopic surgery may be suggested to correct the facial nerve paralysis. Caregivers should be prepared to continue physical therapy and have their child's speech and hearing evaluated to insure the best result possible.

Anthony's Story

In June 2010, nine-year-old Anthony* finally received what he always wanted: a new smile. Anthony was born with a condition called facial palsy. During labor or birth, pressure on a baby's face may cause the facial nerve to be injured or torn. The injury is often seen when the baby cries or laughs, as there is little to no movement on the side of the face with the injury. Many parents are told there is no cure and to accept the condition as it is. However, Anthony's parents remained hopeful and began seeing doctors all over the country. The family even traveled overseas for alternative therapy involving Chinese and Western medicines. Anthony tried acupuncture, massage and numerous treatments from various neurologists and plastic surgeons in an effort to see if someone could help. Sadly, no one had an answer and he showed no sign of improvement. A chance meeting with another family who shared the same experience changed their world. Anthony was referred to Brian Labow, MD, and Amir Taghinia, MD, in the Plastic & Oral Surgery Department at Children's. Drs. Labow and Taghinia suggested an operation that very few places perform. They would treat the facial palsy with an operation that involves a muscle transfer from the thigh to the affected nerve. Although a fairly new and innovative procedure, it gives children the ability to smile normally, most for the first time. Anthony and his family are "so pleased with the outcome and very grateful to have connected with Dr. Labow and Dr. Taghinia." While facial palsy is not common, it can cause a variety of functional and social problems. Anthony was bothered by his condition. It affected his confidence and self-image. Kids in school teased Anthony. Strangers queried his parents. Anthony often asked his mom the heart-breaking question of why it had happened to him. When Anthony was referred to Children's, he was given hope, and even better, a new smile. Anthony's smile is now balanced on both sides. Had they "known it would be so great", his family "would have had it done years ago!"



*Name has been changed to protect the identity of the patient

Hand and Reconstructive Microsurgery

- The most common hand anomalies are extra digits (polydactyly) and webbed fingers (syndactyly)
- Malformations appear to occur randomly and evenly among races
- Hand anomalies may affect one or both hands
- Research shows there may be genetic links

The Hand and Reconstructive Microsurgery Program at Children's Hospital Boston prides itself on their team's expertise and management of congenital and acquired hand deformities. Combined training in adult and pediatric orthopedics, hand surgery, plastic surgery and microsurgery allows surgeons to provide a comprehensive level of care unmatched in most other hospital settings. The program treats patients with a host of unique conditions, including: fused or extra digits, club hand, macrodactyly (overgrowth of the hand and/or fingers), vascular malformations, arthritic conditions, fractures, strains and sprains, and traumatic injuries. Hand anomalies are visible at birth and can also be detected through prenatal ultrasound. Radiographs may also be obtained to assess the severity of the hand anomaly. Treatment includes reconstructive surgery and a complete team approach to help provide your child with the best care possible.

Aaron's Story

When Aaron was born with a deformed hand due to Amniotic Band Syndrome (ABS) three years ago, his parents were understandably concerned. ABS, also known as Constriction Band Syndrome, is a congenital disorder that occurs in about one in every 10,000 to 15,000 babies when fibrous bands of the amniotic sac become entangled around a developing fetus.

Although Aaron's condition was moderate, constriction rings caused his index, middle and ring fingers to become misshapen and swollen. Luckily, the underlying bones in his other fingers were unaffected.

Shortly after Aaron was born, he was connected with Children's reconstructive plastic surgeon Dr. Brian Labow, who specializes in treating congenital hand anomalies. Because so many of Aaron's fingers were affected, some having more than one ring, Dr. Labow staged his treatment over three separate operations. First, Dr. Labow removed the single constriction band on Aaron's index finger and the bands near the ends of the middle and ring fingers. Several months later, the remaining constriction bands on Aaron's middle and ring fingers were removed. His third operation was to repair his pinky.

Even though additional operations may be required in the future, Dr. Labow says that Aaron will likely have exceptional long-term function of his hand. Until then, Aaron will participate in occupational and physical therapy to help him use his hand, to soften scars and to reduce any remaining swelling.



Adolescent Breast Clinic

- Both males and females can suffer from breast disorders
- Macromastia is the most common diagnosis in women
- Gynecomastia is the most common diagnosis in men
- Some conditions cause physical symptoms such as back and neck pain or psychological issues
- Incidence of breast problems has risen sharply and can be linked to puberty and obesity

In recent years, the occurrence of breast problems in adolescents has risen sharply, likely the result of increasing obesity rates. In return, a multidisciplinary group of physicians at Children's Hospital Boston has launched the Adolescent Breast Center. This center is the first of its kind in the country and treats a variety of breast problems. Founded out of a growing awareness that breast-related problems are not one dimensional, the team collaborates with like-minded clinicians and specializes in the evaluation and treatment of various breast diagnoses. The clinic treats the growing number of adolescents with congenital breast differences such as breast asymmetry, gynecomastia, hypomastia, macromastia, Poland syndrome, polymastia, polythelia and tuberous breast deformity. Some disorders may be visible at birth; however, most are usually detected later in life during adolescence as a child goes through puberty. In some cases, medication, proper diet and exercise may prove helpful in correcting certain breast anomalies. At times, the anomaly may be a normal part of puberty and may eventually go away. For more severe cases, surgery may be needed to improve physical symptoms (pain) or quality of life. The center has also established a database to follow patients and record which treatments, whether surgical or non-surgical, are most successful.

Online Services

In October 2009, the Department of Plastic & Oral Surgery launched a Facebook page, catering specifically to the needs of cleft patients and families. This page joins with Children's Hospital Boston's current Facebook page, to create a great way to get breaking news from the department, connect with other patients, parents, and families, exchange photos and send encouragement to others going through the same procedures. The department also maintains a Twitter account, which is a quick way to keep up on the latest news from our department and the hospital as a whole. In addition to the Cleft Lip and Palate page, we hope to one day have a page that encompasses what the Department of Plastic & Oral Surgery does and the specialties we treat. We encourage your participation and we hope you stay tuned for our future projects to launch.

Connect with us!

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Meet the team



John G. Meara, MD, DMD, MBA

Plastic Surgeon-in-Chief

Specialties: Cleft lip and palate, craniofacial surgery, pediatric plastic surgery

John G. Meara was appointed as Plastic Surgeon-in-Chief in 2006. He is associate professor of plastic surgery at Harvard Medical School and is director of the Global Surgery Fellowship at Children's Hospital Boston. He received his MD from the University of Michigan. He completed his postgraduate training at the University of Michigan, Massachusetts Eye and Ear Infirmary, Brigham and Women's Hospital, Children's Hospital Boston, and Royal Children's Hospital. His research interests fall within the fields of global burden of surgical disease, impact of surgical intervention in low income countries, cleft lip and palate and craniofacial quality, safety, cost and comparative effectiveness, value based evaluation of pediatric multidisciplinary care, and activity based costing evaluation of pediatric surgical care delivery.



Bonnie L. Padwa, DMD, MD

Oral Surgeon-in-Chief

Specialties: Pediatric oral and maxillofacial surgery, orthognathic surgery

Bonnie Padwa is the Oral Surgeon-in-Chief for the Section of Oral and Maxillofacial Surgery. She is an associate professor at Harvard School of Dental Medicine. She received her MD from Harvard Medical School and her DMD from Harvard School of Dental Medicine. She completed her postgraduate training at Children's Hospital Boston, Brigham and Women's Hospital and Massachusetts General Hospital. Her research interests fall within the fields of oral and maxillofacial surgery, cleft lip and palate and craniofacial surgery.



Shelly Abramowicz, DMD, MPH

Specialties: Pediatric oral and maxillofacial surgery, temporomandibular joint disorders, orthognathic surgery

Shelly Abramowicz received a Doctorate of Dental Medicine and Masters in Public Health from the University of Pittsburgh School of Dental Medicine. She completed an internship and residency in Oral and Maxillofacial Surgery at the University of Florida. Her research interests fall within the fields of temporomandibular joint disorders, orthognathic surgery, and cleft lip and palate.



Arin K. Greene, MD, MMSc

Specialties: Vascular anomalies, breast surgery, laser surgery, pediatric plastic surgery

Arin K. Greene received his MD from the University of Illinois School Of Medicine and a Master of Medical Science (MMSc) in vascular anomalies from Harvard Medical School. His internship and residency in general surgery was at the Beth Israel Deaconess Medical Center, followed by a plastic surgery residency with Harvard Plastic Surgery Training Program. Dr. Greene has completed two fellowships at Children's Hospital Boston including a research fellowship in the Department of Surgery and a fellowship in Craniofacial and Pediatric Plastic surgery. His research interests fall within in the fields of vascular anomalies, cranioplasty, and lymphedema.



Brian I. Labow, MD

Specialties: Hand surgery, reconstructive microsurgery, breast surgery

Brian I. Labow received his MD from Harvard Medical School. He completed his postgraduate training at Massachusetts General Hospital, Harvard Plastic Surgery Training Program, Children’s Hospital Boston, and Beth Israel Deaconess Medical Center. His research interests fall within the fields of adolescent breast disorders, and congenital hand anomalies.



John B. Mulliken, MD

Director, Craniofacial Center
Director, Craniofacial Fellowship Program
Co-Director, Vascular Anomalies Center

Specialties: Cleft lip and palate, craniofacial surgery, vascular anomalies

John B. Mulliken received his MD from Columbia University, College of Physicians and Surgeons, and completed general surgical training at Massachusetts General Hospital and plastic surgical residency at The Johns Hopkins Hospital. He continues to teach and mentor medical students, residents, fellows and international surgeons. His research interests fall within the fields of cleft lip/palate and craniofacial and vascular anomalies.



Amir H. Taghinia, MD

Specialties: Hand surgery, reconstructive microsurgery, pediatric plastic surgery

Amir H. Taghinia received his MD from the Harvard-MIT Division of Health Sciences and Technology at Harvard Medical School. He completed his postgraduate training at Massachusetts General Hospital, the Harvard Plastic Surgery Training Program, Children’s Hospital Boston, and Beth Israel Deaconess Medical Center. In addition to residencies in general and plastic surgery, Dr. Taghinia has also completed a fellowship in hand and micro-surgery. His research interests fall within the fields of congenital hand anomalies, hand trauma, and improving clinical trials.

Department Locations

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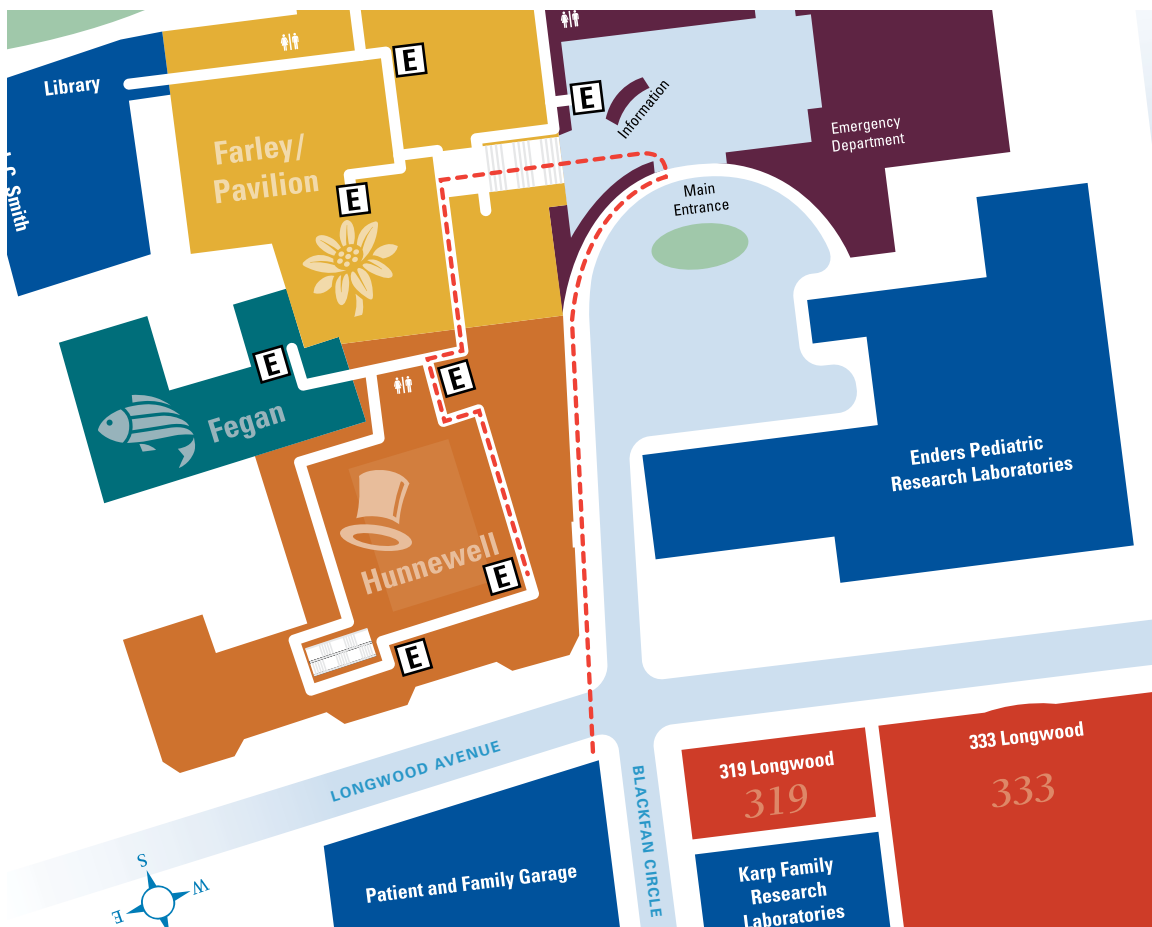
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Route to our clinic in Boston





Children's Hospital Boston