

OUT IN FRONT

2021

WOMEN'S AND CHILDREN'S HEALTH

COVER STORY

Little feet making big strides

Preemie beats the odds thanks to UTHealth pediatric neurosurgeon

Bite-sized innovation

Dental program transforms graduates into pediatric specialists

Leading the class

Student leaders foster equity and inform policy

MANY FACES. ONE MISSION.

The Campaign for UTHHealth

In 2021, we launched the public phase of the university's first comprehensive campaign, *Many Faces. One Mission*. Through the generosity of our community, this campaign will empower us to carry out our mission in new ways and to build on our expertise and to bring our unique capabilities when and where they are most urgently needed.

Many Faces. One Mission. is our **\$500 million** commitment to:



Advancing brain and behavioral health

We are building a leading center of care for brain and behavioral health, dedicated to discovering better treatments for neurological conditions and making mental health care accessible to all.

Training the next generation of health professionals

We will deepen our commitment to the next generation of practitioners and innovators as well as the experts who educate them to address shortages in critical health professions.

Improving Houston's health

We will save lives and improve health outcomes throughout Houston and Texas by amplifying collaborative research; encouraging a passion for learning; and promoting patient care and public health projects, programs, and outreach initiatives.

uth.edu/many-faces-one-mission

STORY LEGEND

The many faces of UTHHealth are dedicated to training the health leaders of tomorrow, conducting groundbreaking research to improve the health and well-being of our communities, and delivering exceptional care to people of all ages. Each story in *Out in Front* is aligned with one or more of these mission areas, indicated by these icons.



EDUCATION



RESEARCH



PATIENT CARE

TABLE OF CONTENTS

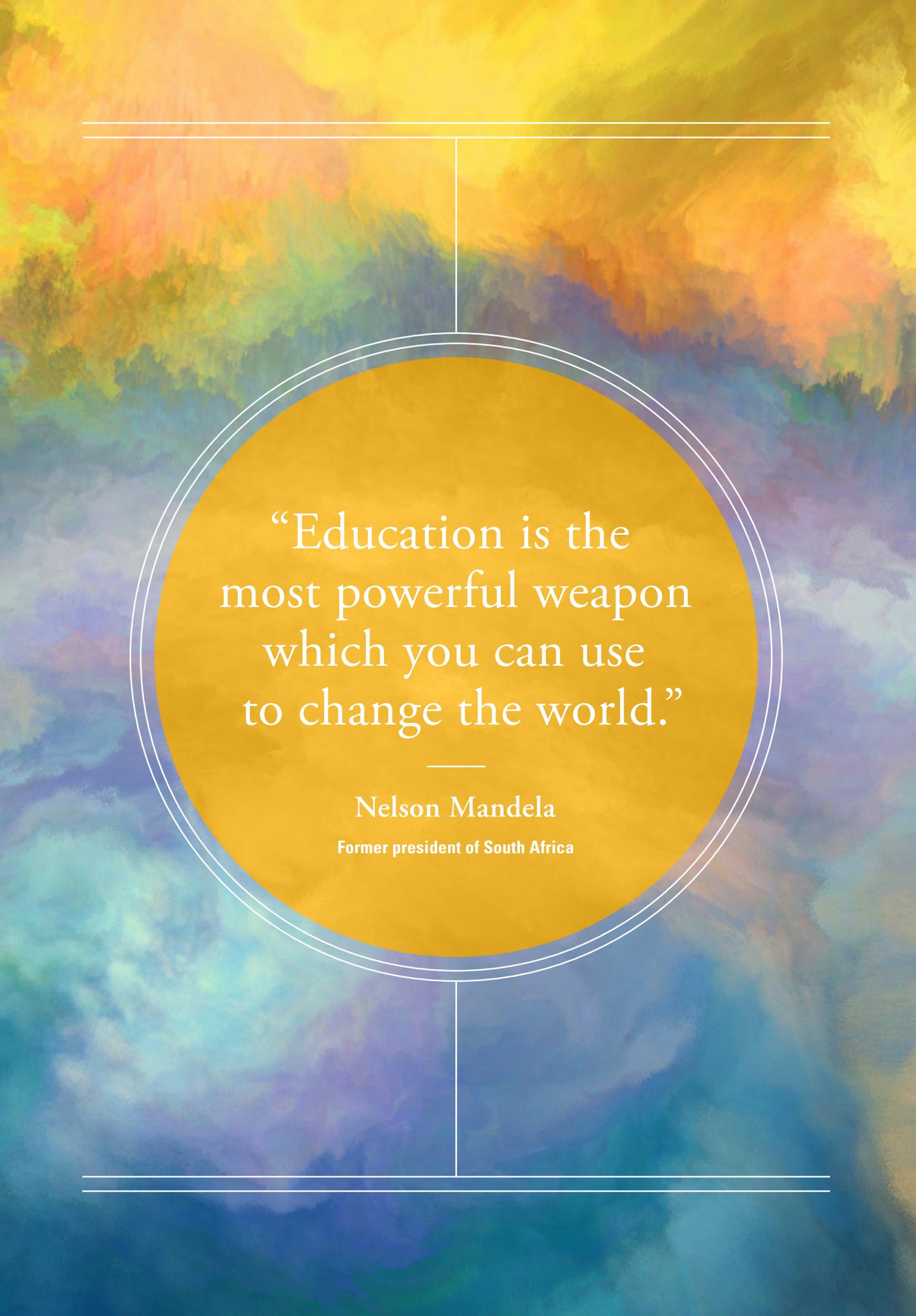
- 6** **LITTLE FEET MAKING BIG STRIDES**
Premie beats the odds thanks to UTHealth pediatric neurosurgeon
- 10** **VISION TO REALITY**
A unique award inspires innovation
- 12** **HOPE FOR THE LITTLE ONES**
Retraining the brain to overcome pediatric stroke
- 14** **BITE-SIZED INNOVATION**
Dental program transforms graduates into pediatric specialists
- 17** **ALL IN**
Alumna leads the way for future generations
- 18** **A FUTURE FULL OF SMILES**
Outreach event provides dental care to underserved children
- 22** **STRONGER LINKS, HEALTHIER COMMUNITIES**
Connecting social services and health care
- 26** **THE BIG PICTURE**
Understanding the impact of COVID-19 on Hispanic families
- 28** **FROM HEALER TO HEALING**
Trauma ICU nurse fights breast cancer during COVID-19
- 32** **LEADING THE CLASS**
Student leaders foster equity and inform policy
- 34** **THE WONDER WOMEN OF ORAL HEALTH**
Mentoring the next generation
- 38** **A CYCLE OF EMPOWERMENT**
Alumna's gratitude enhances department
- 40** **A HEALTHY FOUNDATION**
UTHealth public health expert seeks to remedy childhood obesity
- 44** **NURTURING NEW GROWTH**
Helping children flourish during the shift to remote learning

ABOUT THE COVER

At birth, Aries was small enough to fit comfortably in the palm of a hand. Though tiny, he showed tremendous might as he overcame life-threatening brain bleeds with help from pediatric neurosurgeon Manish N. Shah, MD.

Despite a harrowing start, Aries soon became a pioneer as the first child to test a wearable brain imaging device that Shah's team is developing. With a million dollar smile, he continues to beat the odds and teach everyone around him the true meaning of resilience.





“Education is the
most powerful weapon
which you can use
to change the world.”

—
Nelson Mandela
Former president of South Africa



WITH GRATITUDE

A commitment to women's and children's health is a promise to secure the well-being of our communities long into the future. Across UTHealth, our experts are driving research and delivering care that empowers women to take control of their health and helps children thrive in their most critical years of development.

I am pleased to share this year's ***Out in Front: Women's and Children's Health*** publication, which highlights the extraordinary contributions of our students, clinicians, and researchers to this field—from an intricate brain surgery that saves a premature infant, to mentoring the next generation of women in science, to building a healthy foundation for children and families to flourish.

The generosity of donors like you make these advancements possible. Your investment extends beyond the walls of UTHealth, supporting women as they change the landscape of health care and enabling families to keep their children healthy and happy.

On behalf of the members of the UTHealth community who share your commitment to advancing women's and children's health, we simply say: **Thank you.**

Giuseppe N. Colasurdo, MD

UTHealth President
Alkek-Williams Distinguished Chair



Although Aries Williams has faced formidable challenges in his young life—including brain bleeds, cerebral palsy, and seizures—he continues to defy the odds. With support from his mother, Aisha, he is taking life step by step on the way to new milestones.

LITTLE FEET *making*

BIG STRIDES

PREEMIE BEATS THE ODDS
THANKS TO UTHEALTH PEDIATRIC
NEUROSURGEON

Separated by the glass barrier of the neonatal incubator, Aisha Atkinson watched over her newborn son, Aries, longing to hold him, to touch him, to love him. Entangled by tubes and wires, he fought for his life while an orchestra of machines whirred in the background.

“You’re going hear a lot of difficult things, baby, but just keep fighting so you can make it home to us,” Aisha recalls telling him. “I was saying this to him, but in a way, I was also saying it to myself.”

Born at Children’s Memorial Hermann Hospital on November 11, 2017, at 23 weeks gestation, Aries weighed just one pound, 11 ounces—small enough to fit into the palm of a hand. During birth, he suffered two massive brain bleeds, leading to the development of hydrocephalus, a dangerous buildup of cerebrospinal fluid in the brain. The damage to his brain also caused him to develop cerebral palsy, a neurological condition that affects mobility and posture. Additionally, Aries may face seizures and neurological issues throughout his life.



For the first 150 days after his birth, Aisha could only visit him in the protective environment of the neonatal intensive care unit, where health care providers worked tirelessly to preserve his brain and help him build vitality. Throughout the ordeal, Aisha credits Aries' pediatric neurosurgeon from McGovern Medical School at UTHealth, Manish N. Shah, MD, with calming her fears and standing by her family every step of the way.

“From the moment we learned of Aries' life-threatening brain bleeds, Dr. Shah walked us through some of the hardest decisions we've ever had to make,” she says. “I didn't understand what was happening, and I didn't know what to expect, but Dr. Shah explained every detail and guided us through every procedure. He treated Aries the way he would treat his own children.”

During Aries' time in the neonatal intensive care unit, Shah performed three surgeries to help drain the life-threatening buildup of cerebrospinal fluid in the newborn's brain. With Shah's help, Aries began defying the overwhelming odds stacked against him at birth, growing healthier and stronger by the day.



From patient to pioneer

Aries may have started life as a patient, but in January 2018, he became a pioneer as the first child to test a groundbreaking wearable brain imaging device that Shah's team is developing. Called Cap-based Transcranial Optical Tomography (CTOT), it is the world's first high-resolution, whole-brain functional imaging device that does not require the baby to be put under anesthesia.

"Traditional brain scans using MRI or PET require doctors to put young children under anesthesia, which can open them to major risks such as pneumonia, aspiration, vocal cord damage, and brain damage," explains Shah. "CTOT is essentially a hat that we place on the child's head while the child is being held by a caregiver. It uses harmless night-vision goggle technology, near-infrared light, and high-resolution detectors to map the brain, allowing us to pinpoint which parts are not functioning normally."

In addition to providing a safer way to image the brains of young children, CTOT will help physicians diagnose brain disorders earlier and choose treatments that are more effective for each patient.

"This trial is something that Aries will be proud to have been part of for the rest of his life," says Aisha. "His resilience has already touched so many people, and through CTOT, he will give hope to countless other children and families who face similar obstacles."

A million-dollar smile

After graduating from the neonatal intensive care unit in April 2018, Aries began to thrive beyond all expectations. He continues to reach new milestones—including taking steps with assistance—through hard work in physical, occupational, and speech therapy. In August 2020, he joined his peers in day care for the first time, immediately becoming the star of the classroom.

"He always has this million-dollar smile that tells the world he's not worried about what he's facing, he's just living life to the fullest," says Aisha. "Every day, he teaches everyone around him the true meaning of resilience."

Aries' birth may have been punctuated by uncertainty, but his life is defined by love and perseverance.

"Some of the greatest lessons I've learned in motherhood are to love your children for who they are and be grateful for the good in life," says Aisha. "If Aries didn't have Dr. Shah as his neurosurgeon, I wouldn't have this beautiful and happy little boy."



Manish N. Shah, MD

William J. Devane Distinguished Professor
Associate Professor, Division of
Pediatric Neurosurgery
Department of Pediatric Surgery
McGovern Medical School at UTHealth

VISION *to* REALITY

A UNIQUE AWARD INSPIRES INNOVATION



Even though Morgan Layton (left) has a rare form of epilepsy that defies most treatments, members of her health care team, including Clinical Care Coordinator and MEG Technician Lisa M. Caballero (right), help her keep smiling with determination.

The thought of a surgeon cutting into your child's brain is enough to send any parent spiraling. Tawny McAnally knows the feeling all too well. Her daughter, Morgan Layton, was diagnosed at age 13 with intractable epilepsy, a neurological disorder causing seizures that cannot be managed using medication.

Morgan's rare form of epilepsy causes 16 types of seizures up to 200 times per day. In March 2019, after searching for an effective treatment for three years, doctors referred Morgan to Manish N. Shah, MD, a faculty member of UTHealth Neurosciences who surgically removed part of her brain to help mitigate her most severe seizures. Nine months later, Shah performed a procedure to implant a vagus nerve stimulator, a device that acts like a pacemaker for Morgan's brain by sending pulses of electrical energy to prevent seizures.

"We came to Dr. Shah feeling defeated, but he gave us hope," says Tawny. "We may not be able to cure Morgan's epilepsy, but with Dr. Shah's help, we are finding ways to manage her seizures."

Aside from Morgan's family and specialists like Shah, people often cannot recognize when she is seizing and needs aid. Wanting to help others recognize different types of seizures and know how to respond, Morgan came up with the idea to create a foundation.

In December 2019, Tawny helped Morgan turn her vision into reality, and the family started the Rare Epilepsy Education Foundation.

"Our goal is to teach caregivers, schools, first responders, and others in the community about rare forms of epilepsy and connect families who are going through similar experiences," says Tawny, who serves as chair of the foundation. "Additionally, we plan to distribute annual awards to researchers for groundbreaking work in epilepsy and other brain disorders."

In December 2020, the foundation presented its first Innovation and Treatment of Brain Disorders Award to Shah for his team's work on Cap-based Transcranial Optical Tomography (CTOT)—an award unlike any other because it brought together many of Shah's current and former patients.



Manish N. Shah, MD

William J. Devane Distinguished Professor
Associate Professor, Division of Pediatric Neurosurgery
Department of Pediatric Surgery
McGovern Medical School at UTHealth



Eva Sevick, PhD

Nancy and Rich Kinder Distinguished Chair in Cardiovascular Disease Research
Professor and Director, Center for Molecular Imaging
McGovern Medical School at UTHealth

Medical Physics and Quantitative Sciences Programs
MD Anderson UTHealth Graduate School



Banghe Zhu, PhD

Assistant Professor, Center for Molecular Imaging
The Brown Foundation Institute of Molecular Medicine for the Prevention of Human Diseases
McGovern Medical School at UTHealth



Tawny searched on social media for other families whose lives Shah has touched—including Aries’ mother, Aisha—and invited them to join a special videoconference award presentation. Each family watched from home while Shah received a commemorative plaque and cards they had signed with special notes of gratitude.

“This is the most meaningful award I may ever receive,” says Shah. “Sometimes, I wonder if my patients know how much I think of them, but this award truly shows how much they think of me. I feel so honored to be part of each of their lives.”

Shah collaborates with faculty from The Brown Foundation Institute of Molecular Medicine for the Prevention of Human Diseases at McGovern Medical School at UTHealth: Eva M. Sevick, PhD, oversees device development, and Banghe Zhu, PhD, is the lead biomedical optical engineer.

“CTOT has the potential to revolutionize the way doctors image the brains of young children, which may help detect brain disorders like epilepsy earlier and lead to better treatments,” says Tawny. “We hope this award inspires Dr. Shah and his team to continue driving innovation.”

As the team refines CTOT to scan faster and more accurately, philanthropic support can help them expand testing to bring the device closer to making an impact for more children and their families.



Morgan counts her parents (top) and grandparents (bottom) among the most important members of her support system.





HOPE FOR THE LITTLE ONES



RETRAINING THE BRAIN
TO OVERCOME PEDIATRIC STROKE



A developing brain holds extraordinary untapped potential—neural networks and pathways form rapidly as children grow and experience the world around them. For victims of neonatal arterial ischemic stroke, a condition that occurs when an infant’s brain loses blood supply, this plasticity offers profound benefits.

“When a stroke affects one side of the brain, survivors often experience muscle weakness and motor difficulties on the opposite side of the body,” says Stuart M. Fraser, MD, who is completing the Child Neurology Residency Program at McGovern Medical School at UTHealth. “I want to help change the story for even the smallest stroke survivors.”

Neonatal arterial ischemic stroke occurs in approximately one out of 1,150 births in the United States due to a blood vessel blockage in the brain. Over time, stroke-related deficits can eventually lead to difficulty walking and other movement challenges as a child grows.

Taking advantage of a growing brain’s flexibility, Fraser is investigating a new method for pediatric stroke rehabilitation with I-ACQUIRE, a study led by Sean I. Savitz, MD. Using constraint-induced movement therapy, they are testing if a cast placed on a child’s unaffected arm will promote greater activity on their weak side.

“By requiring children to use the side of their body affected by the stroke, we believe that they can improve their strength and motor control,” says Fraser. “This has the potential to provide dramatic improvements to their quality of life for years to come.”

As part of the randomized I-ACQUIRE trial, participants up to three years old will be grouped into two different treatment options, receiving either three or six hours of therapy per day for one month. These sessions will involve play activities so that researchers can engage with children doing the things they enjoy—from having fun with new toys to eating meals.

After therapy concludes, the I-ACQUIRE team will conduct follow-up assessments to evaluate how the children progress over a six-month period.

“Stroke in infants is a devastating condition that can lead to a lifetime of disability, and unfortunately, there have been few major advances in pediatric stroke care over the past several decades despite concerted research efforts,” Fraser says. “Through my work with I-ACQUIRE, I hope to help enhance our understanding of pediatric stroke and improve outcomes for patients and their families.”

This study is part of StrokeNet, a multi-institutional initiative launched by the National Institutes of Health to advance stroke treatment, prevention, and recovery. Savitz serves as principal investigator for the UTHealth Regional Coordinating Center in StrokeNet, the largest of the 27 centers established throughout the country.

“There is a lot at stake for this clinical trial,” Savitz says. “These children are just starting out in life, and this research may help them achieve the best possible chances for recovery.”



Sean I. Savitz, MD

**Frank M. Yatsu, MD, Chair in Neurology
Professor, Department of Neurology
McGovern Medical School at UTHealth**

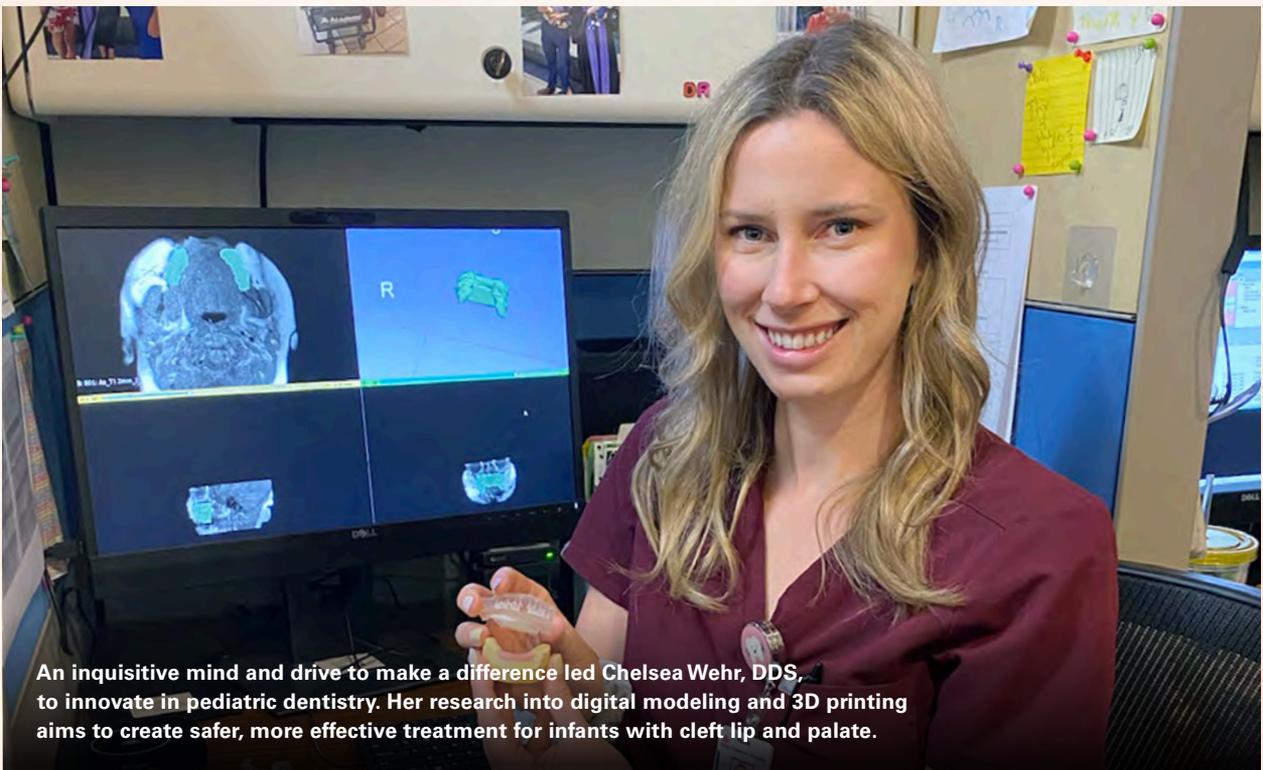
**Director, UTHealth Institute for Stroke
and Cerebrovascular Disease**

**Associate Member
MD Anderson UTHealth Graduate School**



BITE-SIZED INNOVATION

DENTAL PROGRAM TRANSFORMS GRADUATES
INTO PEDIATRIC SPECIALISTS



An inquisitive mind and drive to make a difference led Chelsea Wehr, DDS, to innovate in pediatric dentistry. Her research into digital modeling and 3D printing aims to create safer, more effective treatment for infants with cleft lip and palate.

Chelsea Wehr, DDS, asked herself the same question that has sparked scientific progress throughout the ages: *Is there a better way?*

A second-year resident in the Advanced Education in Pediatric Dentistry Program at UTHealth School of Dentistry, Wehr considered the traditional method of correcting cleft lip and palate in newborns: Infants have a manual impression taken of the inside of their mouths to create a wearable appliance that, along with surgery, corrects the defects. Yet even adults who get manual impressions dislike the process, and it often proves difficult and risky in new babies.

“With all the new developments in digital dentistry, I knew there had to be a better option,” Wehr says. “It turned out several of the other residents had been thinking along the same lines.”

The residency program trains dental school graduates to become pediatric specialists through a two-year course of study that emphasizes clinical practice, research, and didactic learning. Every resident conducts a research initiative during their second year, and Wehr set her sights on bringing cleft lip and palate treatment into the digital age.

In a joint venture with Children’s Memorial Hermann Hospital, Wehr’s project takes an MRI scan of an affected baby’s face shortly after birth. The image feeds into a software program that creates a custom 3D-printed corrective appliance.

“This can make the process safer and faster, and it opens the possibility that in areas without cleft lip and palate specialists, all they need is an MRI to send for a custom appliance,” she says.

Bhavini Acharya, BDS, Director of the Advanced Education in Pediatric Dentistry Program, encourages residents to pursue hands-on research that will lead to tangible improvements for patients. One current initiative, for example, explores using virtual reality glasses to manage anxiety during treatment, while another looks at how child temperament affects the success of sedation.

“We also want them to understand how to identify quality research and apply it to their daily clinical practice,” she says. “As a provider, if they understand the evidence, then they can confidently educate the parents.”



Bhavini Acharya, BDS

Associate Professor, Department of Pediatric Dentistry
Director, Advanced Education in Pediatric Dentistry Program
UTHealth School of Dentistry



Gregory W. Olson, DDS

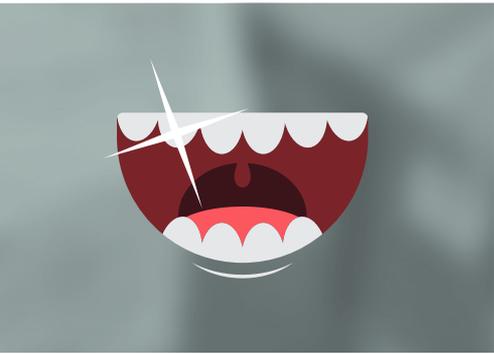
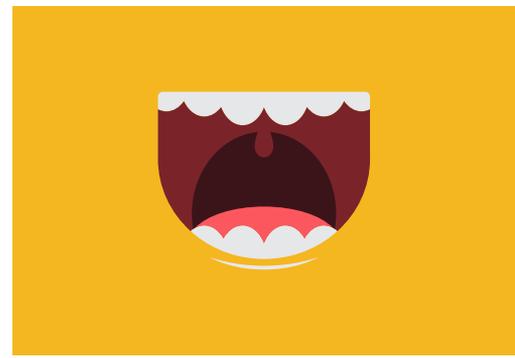
Catherine M. Flaitz, DDS Professor in Pediatric Dentistry
Professor and Chair, Department of Pediatric Dentistry
UTHealth School of Dentistry



Muhammad F. Walji, PhD '06

Chair in Dental Informatics
Professor, Department of Diagnostic and Biomedical Sciences
UTHealth School of Dentistry

Adjunct Professor
UTHealth School of Biomedical Informatics



Even as they teach residents, pediatric dentistry faculty place great value on making their own research contributions. For example, Gregory Olson, DDS, collaborates with Muhammad F. Walji, PhD, to research adverse events and dental quality measures. They harness big data to determine if common measures for dental risk are accurately guiding care.

“We know how great an impact proper dental care can have early in a child’s life,” Olson says. “We see the future—including dentistry—depending quite a bit on data, and we want to be in on early stages of that and its potential to better guide care.”

The residents gain an abundance of real-world experience alongside their research endeavors, developing the specialized clinical skills they will need to excel as pediatric dentists. At the school’s Pediatric Dentistry Clinic, they provide a wide range of treatment under faculty supervision, frequently caring for children with unique medical and behavioral complications.

They also conduct outside rotations with clinical partners like Children’s Memorial Hermann Hospital to learn pediatric medicine, general anesthesia, and emergency care.

“We teach the residents that establishing trust is first and foremost,” Olson says. “A lot of that trust happens through openness, transparency, and education. Our residents build a strong scientific foundation in human development and psychology, so they know how to interact with children based on their age.”

The COVID-19 pandemic has brought new challenges to the residency program, requiring quick adjustments. At the Pediatric Dentistry Clinic, residents and staff wear additional personal protective equipment, maintain strict social distancing protocols, and carefully manage scheduling to minimize waiting room traffic.

“This ability to adapt to new developments and think ahead has always been central to the residency program,” Acharya says. “And we want to make sure it always will be.”

ALL IN

ALUMNA LEADS THE WAY FOR FUTURE GENERATIONS



Nurse, teacher, chef, athlete—the possibilities are limitless.

Young people often bounce from one idea to another as they consider their career aspirations. But for Anita Khetan, MD '95, the answer was always simple: doctor.

"I don't think I ever had a backup plan because I knew nothing would make me happier than becoming a doctor," she says.

A graduate of McGovern Medical School at UTHealth, she works as an internal medicine physician and watches as her daughter, a first-year medical student at the school, follows her into the field of health care.

Through the years, Anita experienced some of the challenges that confront women in the medical field.

"The obstacles that face female physicians are as much societal as they are personal," she says. "While more patients have become comfortable with being treated by a woman, we still grapple with the misguided stereotypes that women are weaker, more emotional, and less competent than our male colleagues."

She says having a community of women who support one another is important in promoting their prosperity and success. Such communities can offer mentorship, encouragement, and a forum to discuss problems unique to women.

In an effort to provide this type of guidance to the next generation, Anita serves on the leadership team for the Women in Medicine alumnae group at McGovern Medical School. This group serves as a structured support system for female students and alumnae as they navigate their medical careers.

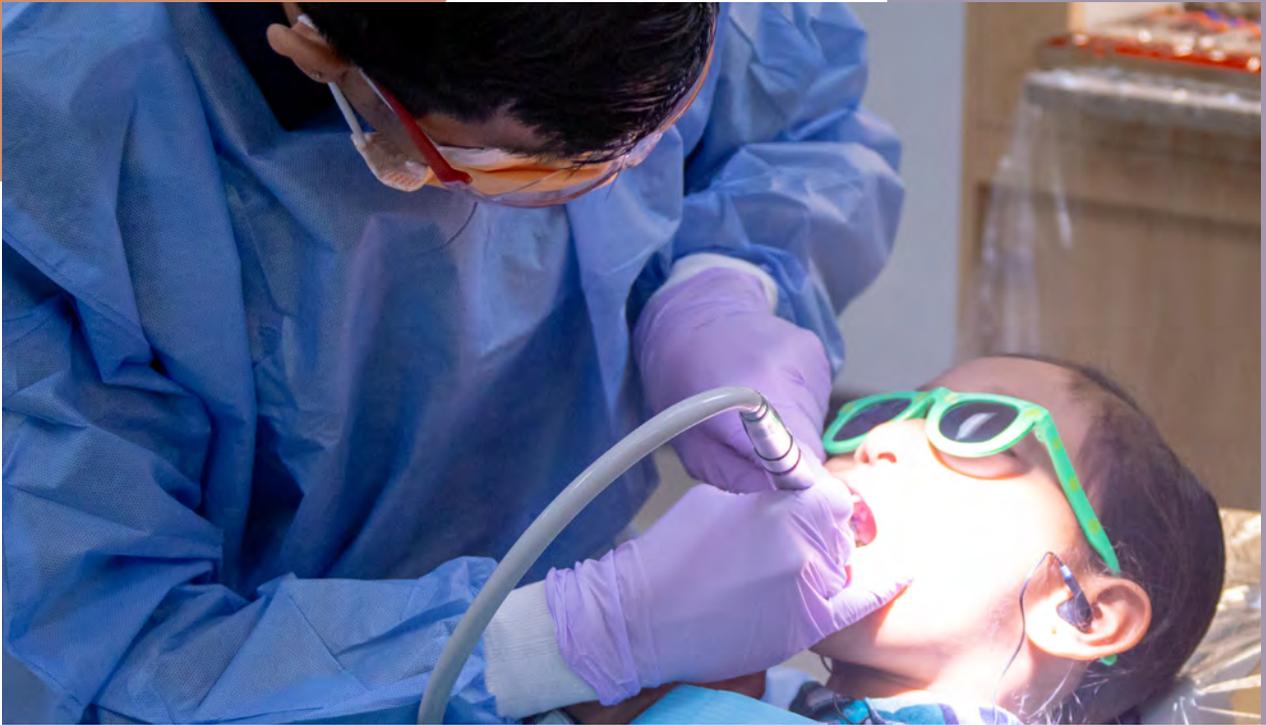
Nurturing future leaders is a family affair for the Khetans. Anita's husband, Rainer Khetan, MD '94, serves on the McGovern Medical School Alumni Association Board of Trustees, and his twin brother, Roger Khetan, MD '94, serves as the board's president and is a member of the UTHealth Development Board. In addition, as a way to pay forward the financial support they received as students, the three established The Khetan Family Scholarship Fund to help medical students achieve their dreams.

Thinking of the future of medicine and the next generation of professionals, Anita hopes for equality.

"I see medicine being the great equalizer, where it doesn't matter if you are male or female, and you just treat patients in the best way possible," she says.







A FUTURE FULL OF SMILES

OUTREACH EVENT PROVIDES DENTAL CARE
TO UNDERSERVED CHILDREN

For children, poor oral health can spark harmful consequences that may affect the entire course of their lives—from pain that impairs concentration in school to discolored teeth that might impact their confidence.

Since 2003, UTHealth School of Dentistry has teamed up with the Greater Houston Dental Society to offer Give Kids A Smile, a day of free oral care for underserved children in the community.

Community partners identify schools with significant dental needs, and the School of Dentistry's Mobile Dental Van visits the schools to assess children and determine what care they will need before they arrive at Give Kids A Smile.





With support from philanthropic partners including Delta Dental Community Care Foundation, third- and fourth-year dental students, pediatric residents, second-year dental hygiene students, and faculty come together to help the event succeed. Students work under resident and faculty supervision, while volunteer dental professionals from across Houston participate as well. Care includes preventive treatments, simple extractions, and limited restorative procedures as well as dental education to show children how to start a lifetime of healthy habits.

“We can’t fix every problem that day, but to make a tangible difference for a child and even bring awareness to parents who may have put dentistry on the back burner—it’s a rewarding experience,” says Chelsea Wehr, DDS, a second-year resident in the school’s Advanced Education in Pediatric Dentistry Program.

Since the program’s inception, Give Kids a Smile has served more than 2,600 children. In 2020, however, the COVID-19 pandemic began rapidly spreading worldwide around February—when Give Kids A Smile normally occurs—forcing the event to be paused through 2021.

“We were disappointed to not be able to have it because it does so much for the kids, and our residents really enjoy the experience,” says Bhavini Acharya, BDS.” But given how little we knew about the virus then, canceling the event was really the only choice.”

The school was still able to identify a number of children and adolescents with specific needs who later came to its on-site clinic for treatment. Looking to the future, School of Dentistry administration are planning for Give Kids A Smile to resume in the spring of 2022 pending developments surrounding COVID-19.



Bhavini Acharya, BDS

**Associate Professor, Department of
Pediatric Dentistry
Director, Advanced Education in
Pediatric Dentistry Program
UTHealth School of Dentistry**

CROWDFUNDING CAMPAIGN HELPS MOBILE DENTAL CLINIC DRIVE FORWARD

Sometimes, distance can prove the greatest barrier to quality oral health care, which makes the Mobile Dental Van at the School of Dentistry so important.

This specialized vehicle—a clinic on wheels—has been in service since 2002, traveling more than 100,000 miles to care for thousands of low-income patients in the Greater Houston area and East Texas.

Many of the patients lack insurance and reliable transportation to clinics, leaving them at risk of dental disease and other complications without proper care. Students from the School of Dentistry staff the van under supervision of the clinical faculty coordinator, providing oral health care such as screenings, preventive and restorative dentistry, and education.

Almost two decades later, the vehicle is reaching the end of its service life, and maintenance costs have grown prohibitively expensive with some parts no longer available. Community supporters—including a lead commitment from the TLL Temple Foundation—provided critical contributions to purchase and fully outfit a new vehicle.



Margo Melchor, EdD, RDH

Associate Professor, Department of
Periodontics and Dental Hygiene
Director, Community Outreach
UTHealth School of Dentistry



With a few gifts still needed to reach the fundraising goal for the new van, UTHealth launched a crowdfunding campaign, which relies on the collective power of a large number of small gifts to make a sizeable contribution. The campaign concluded successfully in December 2020 with 62 donors.

“The Mobile Dental Van not only gives students valuable clinical experience, but it shows them firsthand the importance of giving back to others,” says Margo Melchor, EdD, RDH, Director of Community Outreach for the School of Dentistry. “Serving the community has always been a central aspect of our mission at the school, and this vehicle plays a key role in making that possible.”

“Time and again, our donors have made it possible for us to continue helping those in need,” she says. “Through their giving, we are doing something together that will make a lifetime of difference for the patients we serve.”



STRONGER LINKS, HEALTHIER COMMUNITIES

CONNECTING SOCIAL SERVICES AND HEALTH CARE



The headlines scroll endlessly across our screens as digital trackers race to keep pace with COVID-19 cases and deaths. But in the wake of this turbulent health crisis, some of the most vulnerable members of our community are fighting a concurrent economic pandemic with enormous stakes: falling behind financially and facing a deadly disease.

Social determinants of health—including employment, the availability of nutritious food, transportation, and access to health care—influence approximately 80% of an individual's health outcomes. Unfortunately, the economic fallout from COVID-19 heaped additional burden on people who may have already been struggling to make ends meet, making it more difficult than ever to access care and social services.

"We have seen an alarming 20% increase in families experiencing food insecurity during the pandemic," says Shreela V. Sharma, PhD, RD. "A lack of basic resources, such as healthy foods, increases the risk for chronic diseases like obesity, diabetes, and heart disease—the same diseases that make people more susceptible to the fatal complications of COVID-19."

Complicating matters for families in need, resources and social services are fragmented, making it difficult to find help. Often, the same family struggling to put food on their table also needs additional help, such as housing support, transportation assistance, or affordable health insurance.

As part of UTHealth School of Public Health's response to the COVID-19 pandemic, Sharma is leading an effort to address the mounting health and social needs of families throughout our communities by facilitating the development of a Community Information Exchange as part of her leadership role in the Health



Equity Collective. She serves as co-lead of the Health Equity Collective, a community-wide coalition in the Greater Houston area that consists of more than 120 local organizations with UTHealth, American Heart Association, and Harris County Public Health providing the backbone. The Community Information Exchange is one of the Health Equity Collective's primary efforts to establish an impactful and sustainable data-driven system to promote health equity in our community.

“We don't want to just document the social issues impacting health outcomes; we want to do something about them,” she says. “With our school's infrastructure embedded in our communities, we can meet patients where they are, learn what helps them most, and scale the Community Information Exchange to meet the needs of everyone during this pandemic and beyond.”



Shreela V. Sharma, PhD, RD

Professor, Department of
Epidemiology, Human Genetics, and
Environmental Sciences
UTHealth School of Public Health

SOCIAL DETERMINANTS OF HEALTH

INFLUENCING APPROXIMATELY 80% OF AN INDIVIDUAL'S HEALTH OUTCOMES



Employment



Food



Transportation



Health care

Health care organizations commonly screen patients for social determinants of health, which allows providers to understand the specific factors that may affect a patient's health condition. The Community Information Exchange will enable social services and health care organizations to provide referrals to each other and ensure patients' needs are met. This will also help pinpoint the impact of social services on population-level health outcomes.

"Similar to how doctors send patients' prescriptions to pharmacies, health providers will be able to use it to send prescriptions for social services," Sharma explains. "For instance, a doctor can refer a patient who does not have access to healthy food to a specific food pantry. The exchange will also notify the social service provider to ensure they are prepared to assist the patient."

Additionally, people will be able to access the Community Information Exchange outside of the health care setting via an online access portal. After a client takes a screening test for various social needs, the exchange will identify services that the client can select.

"The Community Information Exchange will help us improve the health of vulnerable populations and make everyone more resilient against COVID-19," says Sharma. "And it will continue to serve as an excellent resource for our community long after the pandemic passes."

As part of the Health Equity Collective, Sharma plans to test a prototype in 2021 with a select group of nonprofit and health care partners. The exchange will gradually incorporate more partners, including health care providers, to offer seamless service to residents throughout the Greater Houston area.

Philanthropy can help Sharma's team expand the exchange and scale it across the state to build a more equitable, accessible health system for every Texan.

"We are all in this together," says Sharma. "The Community Information Exchange will help shield our communities by ensuring everyone has access to vital resources."



A BRIGHTER OUTLOOK AHEAD



As quarantines and lockdowns rippled through our communities at the onset of the COVID-19 pandemic, Sharma recognized an opportunity to help families address mounting health and social needs through Brighter Bites, a nonprofit organization she cofounded in 2012. Brighter Bites distributes fresh produce and educational nutrition resources to low-income families in six major cities across the nation, including Houston. With help from School of Public Health students, they are compiling resources to ensure families have access to the help they need.

“We started by collecting evidence-based information, such as food pantry procedures, public transportation schedules, eviction laws, and mental health guidance,” says Amelia Khoei, a third-year MD/MPH student. “We organized that information into comprehensive documents for clients at each Brighter Bites location.”

Amelia also mustered additional student volunteers.

“Five minutes after sending a call for help to classmates, every volunteer position was filled,” she says. “COVID-19 canceled our clinical courses in 2020, taking us away from patients, but we all still wanted to do anything we could to help people in our community.”

Maha Almohamad, a second-year PhD student in epidemiology and graduate research assistant at Brighter Bites, is leading the charge to confirm the accuracy of each resource.

“We are constantly updating our resources as laws and guidelines change,” she says. “We also translate the resources into the languages our Brighter Bites families speak to ensure everyone has access.”

The COVID-19 pandemic has exacerbated the health and social inequalities that torment our communities, but thanks to School of Public Health students like Amelia and Maha, Brighter Bites is helping to safeguard our most vulnerable families.



Amelia Khoei

MD/MPH student
School of Public Health



Maha Almohamad

PhD student
School of Public Health



THE BIG PICTURE

UNDERSTANDING THE IMPACT OF COVID-19 ON HISPANIC FAMILIES

COVID-19 has destroyed and disrupted lives across the world. But while virtually everyone has suffered at the hand of the virus, some groups in our community have been hit disproportionately hard.

“In addition to experiencing worse health outcomes than other ethnic groups, Hispanic families are enduring some of the worst economic consequences of this pandemic,” says Daphne C. Hernandez, PhD. She is exploring these disparities by studying where parents and teens in Hispanic immigrant families get information about COVID-19, what their beliefs are about the disease, how socioeconomic factors are affecting their health behaviors, and how the virus and other stressors impact their mental health.

These health and economic disparities may be rooted in a number of factors. According to Hernandez, Hispanic residents are losing work or taking pay cuts at higher rates than other groups, they are less likely to have health insurance, and they are more likely to have chronic health problems that make them susceptible to severe illness.

The three-part study began with an online survey in November 2020. From there, it will proceed into focus groups and finish with a photo elicitation phase, where parents and teens will take pictures depicting the positive and negative aspects of their lives during the pandemic.

“Our findings will help us see the big-picture impact of the pandemic on Hispanic families in our community, which will help us work with local and state officials to develop policies and programs that serve as a safety net,” says Hernandez.

In June 2020, she received a \$25,000 Dean’s Research Award for the study, which is helping her team recruit families. She hopes to secure additional funding to expand the study to different regions across the nation.

“As a daughter of immigrants, I am keenly aware of the challenges these families face, including economic hardship and food insecurity,” she says. “I am passionate about finding ways to help, especially as we grapple with this devastating health crisis. Above all, I hope our work helps eliminate the inequalities that plague our communities.”



Daphne C. Hernandez, PhD

Lee and Joseph Jamail Distinguished
Professor in the School of Nursing
Associate Professor, Department of Research
Cizik School of Nursing at UTHealth



**HEALTH AND ECONOMIC DISPARITIES
AFFECTING THE HISPANIC COMMUNITY
DURING THE COVID-19 PANDEMIC**



**More likely to have lost
work or had pay cuts**



**Less likely to have
health insurance**



**More likely
to have chronic health
problems**



FROM
HEALER *TO*
HEALING

TRAUMA ICU NURSE FIGHTS
BREAST CANCER DURING COVID-19

When COVID-19 cases began spiking in early 2020, Liz De Macedo, RN, stood alongside her fellow nurses to care for the critically ill patients inundating Houston hospitals. A Navy veteran and trauma ICU nurse, Liz had always worked to help people, no matter the circumstances. Grappling with the mental and physical strain of the pandemic and her job, Liz put off her routine health care so she could continue providing care for her patients.

“You never expect anything bad at an annual wellness exam—you just expect another regular checkup,” she says. “Unfortunately, I waited a few months because we were facing so many challenges due to COVID-19.”

In September 2020, Liz managed to squeeze in an appointment with her gynecologist. What started out as a routine exam turned upside down when her physician found a lump in Liz’s breast. After receiving an MRI and biopsy, Liz got the news: She had breast cancer.

“My mind started drifting to all the worst-case scenarios,” she recalls. “Even though I work in health care and knew I had good chances for survival, we were living in a pandemic. Would I be able to get treatment in time? Would clinics close again?”

With no family history of cancer—and negative genetic tests for known breast cancer genes—Liz’s shock at receiving a cancer diagnosis quickly shifted into a plan of action.

To remove the growing tumor in her breast, she needed surgery. With the resources of the Texas Medical Center at her fingertips, Liz wanted to find the best surgeon available, so she turned to her colleagues for recommendations. In conversations with physicians and nurses in the ICU, one name kept coming up.

“Everyone told me to go see Dr. Robinson at UTHealth,” she says. “When so many amazing health care workers are telling you how great a surgeon is, you have to listen.”



Emily K. Robinson, MD

Professor, Department of Surgery
McGovern Medical School at UTHealth

When Liz met Emily K. Robinson, MD, her worries about treatment options were quickly addressed. Expecting radical surgery like a double mastectomy, Liz learned about new surgical techniques that improve patient outcomes without removing the full breast.

“I’m an ICU nurse, so I knew just enough about breast cancer to really worry,” Liz says. “But Dr. Robinson’s tremendous calm when describing my surgical treatment options and prognosis put me at ease.”



“Thanks to a routine wellness exam, we caught Liz’s cancer early,” Robinson says. “As a result, I was able to recommend breast-conserving surgery to remove her tumor, followed by radiation therapy to ensure no cancer cells remained.”

Just over a month after being diagnosed with cancer, Liz underwent surgery. Robinson and her team successfully removed the tumor on October 30, 2020, and biopsied one of Liz’s lymph nodes to ensure the cancer had not spread to other parts of her body. With a cancer-free biopsy result and an easy recovery, Liz began receiving regular radiation treatments in November 2020.

“Dr. Robinson and her team did an amazing job,” she says. “My scar looks great, and I experienced minimal discomfort during the healing process.”

While less intensive than some other cancer treatment options, surgery and radiation can still take a heavy toll. For Liz, who spends her days caring for the sickest patients in the ICU, her medical team encouraged her to take leave from work.

“It has been very challenging to sit at home while I see so many people needing help during the pandemic,” she says. “I’ve had to focus on healing and helping myself instead, which doesn’t come naturally to me.”

Liz has also spent the last year focused on finding joy: She and her partner of 12 years, Kenan Acar, got married in early October 2020.

“This year has shown us how precious and fragile life can be,” Liz says. “We decided to make a reason to celebrate despite everything that’s going on around the world.”

Liz finished her last radiation treatment during the final days of 2020 and celebrated the new year cancer-free. With overwhelming support from her friends and family, she soon returned to work in the ICU.

“For so many people in the medical profession—like my coworkers and Dr. Robinson—helping others is a true calling,” she says. “That holds true for me too, and I am so thankful to continue doing what I love.”

A NEW TOOL TO SPOT PEDIATRIC CANCER SYMPTOMS

From learning to ride a bike to making new friends, childhood is filled with endless possibilities. But for more than 300,000 children around the world, a cancer diagnosis will limit their activities this year. Rather than playing sports or going to school, they will spend time in hospitals undergoing cancer treatments that can bring debilitating side effects.

“How we report and manage cancer symptoms and treatment side effects impacts a child’s quality of life,” says Stacey Crane, PhD, RN, a certified pediatric oncology nurse. “But communicating a child’s symptoms to physicians can be a complicated process.”

Patient-reported outcome tools—systems in which patients or their families directly report symptoms to their health care team—have advanced how health professionals manage cancer treatments. However, many of these tools are complex, involving countless questions about symptoms that many patients may never experience. For a family caring for a child with cancer, it can be too much.

“My goal is to develop a straightforward symptom reporting tool that does not overlook anything a child with cancer may experience,” says Crane. “There is no single journey for young cancer patients, so we have to be creative in our approach.”

With the support of a grant from St. Baldrick’s Foundation—the foundation’s first award to a nurse-scientist—Crane is working to develop a platform for reporting pediatric cancer symptoms. By creating a visually engaging app called the Smart Pediatric Oncology Tracker of Symptoms (SPOTS), Crane hopes to make symptom reporting accessible to patients of all ages.

“On the SPOTS app, children will be able to report symptoms to their physicians by simply pointing to areas of the body or identifying activities where they are having difficulties,” says Crane. “Children often use a different vocabulary than adults, especially for things like body parts, so we have also included a comprehensive search function.”

Crane hopes that the new system will give physicians a better understanding of pediatric cancer symptoms, helping to improve the quality of life for children battling cancer.

“Pediatric cancer is considered a rare disease, so federal funding for research like this remains quite limited,” says Crane. “Philanthropy provides the resources we need to give children with cancer the best possible outcomes.”

Stacey Crane, PhD, RN

Assistant Professor, Department of Research
Cizik School of Nursing at UTHealth



LEADING THE CLASS

STUDENT LEADERS FOSTER EQUITY AND INFORM POLICY

Micaela Sandoval's passion for science took root at an early age, fostered by summers volunteering at the zoo and days dreaming of working at the Centers for Disease Control and Prevention. Meanwhile, Tristen Tellman nurtured birthday wishes for chemistry sets and microscopes so she could explore her world.

Coincidentally, each one's journey in science led them to serve on UTHealth's Student InterCouncil, the university's student governance organization. Alongside other student leaders, they made a difference for their school while training to impact their world. And they are grateful for donors who have enhanced their educational experiences along the way.

Micaela: **Championing diversity, fostering equity**

Micaela, a fourth-year PhD candidate in epidemiology at UTHealth School of Public Health, realized she wanted to pursue public health while helping screen children in Malawi for tuberculosis, HIV, and parasites. To her, public health is about turning science into service.

"The best part of our field is working alongside at-risk communities, especially women and children, all over the world to protect them from disease," she says.

Micaela received the R. Palmer Beasley, MD, and Lu-Yu Hwang, MD, Travel Award in International Research and the People with AIDS International Public Health Scholarship, which played a significant role in Micaela's journey, allowing her to travel for research—something she might not have been able to do otherwise.

"In graduate school, we have many opportunities, but sometimes we need support to be able to reach out and take them," she explains. "Scholarships allow us to do that."

Micaela served on the Student InterCouncil, and was the Founding Chair of the Student InterCouncil Diversity and Inclusion Committee.

"UTHealth students are Texas' future scientists, practitioners, and leaders, and the principles of diversity, respect, and equity among all of our faculty, staff, and students help us reach our potential as compassionate, well-rounded professionals," she says.

Over the course of her career, she hopes to foster this sense of equity in public health, something very personal to her as a woman of science.

"Science, medicine, and public health have been damaged by racism, sexism, and colonialism," Micaela explains. "And it's up to all of us to recognize and heal those scars."



Micaela Sandoval

PhD student
UTHealth School of Public Health



Tristen: Informing policy, reversing stereotypes

Tristen, a fifth-year PhD candidate studying biochemistry and cell biology at MD Anderson UTHealth Graduate School, felt her passion for science ignite while listening to a TED Talk about 3D-printed kidneys. The talk left her fascinated as she imagined the possibilities science holds.

Now she is discovering those possibilities firsthand. As a recipient of the Dr. John J. Kopchick Fellowship, she feels deep gratitude for donors who help students like her maximize their time during graduate school. “Ultimately, this is what allows us to continue pursuing our education with absolute tenacity,” she says. “As a donor, that is one of the greatest gifts you can give someone pursuing an education.”

Tristen particularly valued her years on Student InterCouncil. She served in various roles, most recently completing her tenure as president, during which she focused on the group’s role in informing UTHealth policy.

“I am incredibly passionate about the power of the student voice and believe that we, as trainees, need to take every opportunity to speak to leadership candidly about the student experience and push for change where we see it needed,” she says.

As Tristen looks to the future, she hopes to make a difference simply by being a woman in science and reversing the stereotype of science as a man’s field.

“There are many brilliant women in science, and we need to be making every effort to get them out in front of people and demonstrate to young, aspiring female scientists that if they can see it, they can achieve it,” she says.

THE **WONDER WOMEN** *OF* **ORAL HEALTH**

MENTORING THE NEXT GENERATION





“If you had to pick a superhero to describe your path in dentistry, which superhero would you choose?”

Peggy O’Neill, PhD ’74, DDS ’90, contemplated the seemingly odd question posed to her by the moderator during the Women in Dentistry: Reflections of the Past and Present event panel at UTHealth School of Dentistry. Then an answer came to mind—one that would honor her fellow panelists and other women in oral health care.

“Wonder Woman,” she said.

A UTHealth alumna of the School of Dentistry and MD Anderson UTHealth Graduate School, O’Neill is Professor Emerita and former Associate Dean for Patient Care at the School of Dentistry. Now serving on the board of The University of Texas Houston Retiree Organization, O’Neill continues to make her mark in the field of dentistry.

Her answer serves as an apt description of the school’s female students, alumni, staff, and faculty, who fight to protect oral health in our communities while often balancing the responsibilities of work and family life.

The Women in Dentistry panel, held virtually in September 2020, is one of the ways the school recognizes and encourages these remarkable women. Panelists included Sarah Arafat, DDS ’17; Amber Lovatos, BSDH ’13, RDH; Mai-Tram Nguyen, DDS ’91; Kathy O’Keefe, DDS ’85; and Mary Riggs Patten, DDS ’78.

Arafat, now a first-year resident in the school’s Advanced Education in Pediatric Dentistry Program, exemplifies the strength of Women in Dentistry. As a first-generation American and the first in her family to attend a higher education professional school, she says there have been lots of unknowns, but she has been able to succeed with the help of female role models, including School of Dentistry faculty.



“I thrive when I see other women succeeding and realize it’s possible,” Arafat says.

“I couldn’t have done all this without the many, many mentors I have in my life.”

Unfortunately, professional female guidance has not always been readily available to women. According to the American Dental Association, in 2001, only 16% of dentists working in dentistry in the United States were female. However, that number has been steadily rising and now stands at about 33%. The School of Dentistry actively trends higher than the national average. Nearly half of the school’s faculty—and over half of all dental students—are women.

“For those of us later in our careers, I think it is a very important part of our responsibility to support younger women who are coming behind us—to encourage them, to show them the ropes, to let them know what’s available and how to get where they want to be,” adds O’Neill, who worked as a research technician in the 1960s before pursuing doctoral degrees from MD Anderson UTHealth Graduate School and, later, the School of Dentistry.

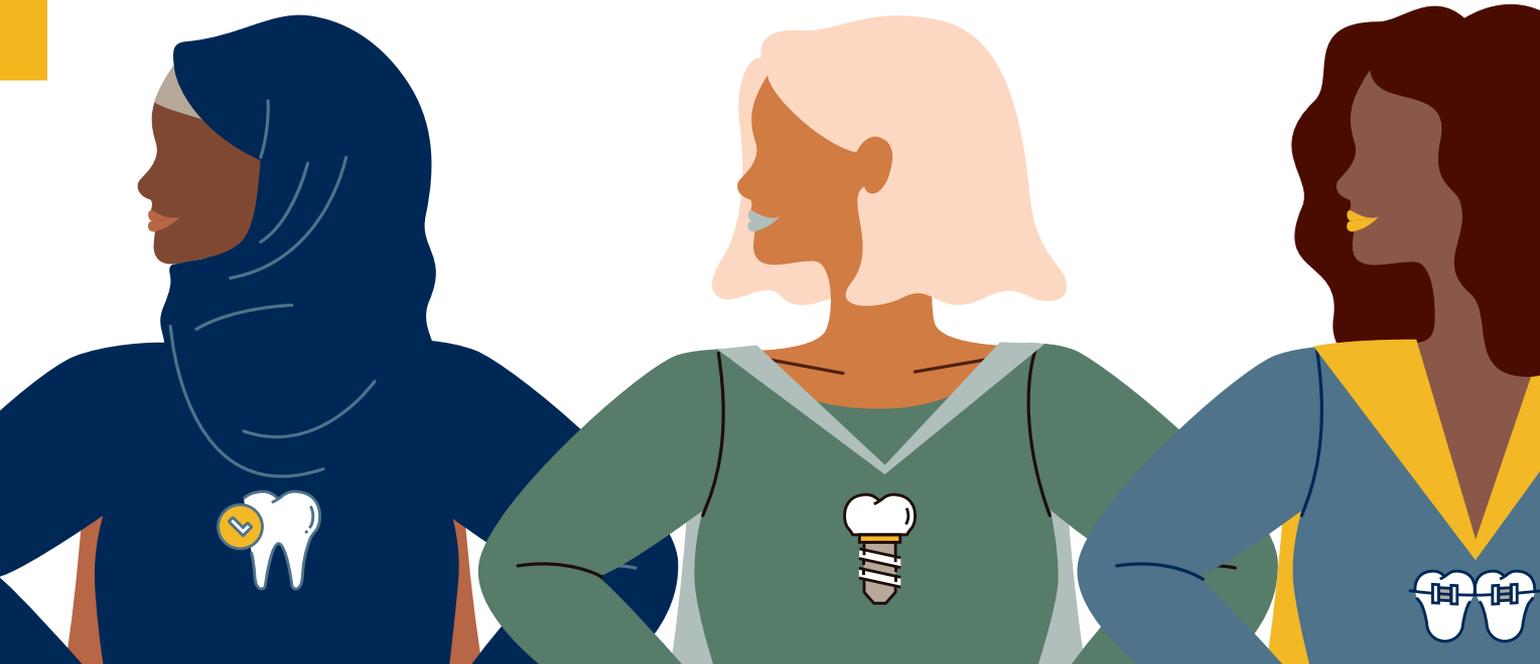
“Some of the best mentors I have had in my life have been women,” says School of Dentistry Dean John A. Valenza, DDS ‘81, who names O’Neill among his own role models. “I wouldn’t be where I am without them.”

As O’Neill reflected on the imagery of superheroes at the Women in Dentistry panel, she imparted a few words of advice to her fellow wonder women of oral health: “Women need to foster and encourage each other to get out there and take that next step. If you are Wonder Woman—and I think my students and colleagues are wonder women—then get out there, jump right in, and do it.”



John A. Valenza, DDS ‘81

Dean
The William N. Finnegan III Distinguished
Professor in the Dental Sciences
UTHealth School of Dentistry



FROM TOOTHACHES TO TEACHABLE MOMENTS

"You hear of children missing school because of tooth decay—that was me," Lovatos says.

She remembers once visiting the dentist with her mother after experiencing pain for days, only to be taken home without treatment because her parents could not afford the cost. She recalls how her mother used home remedies instead, putting ground cloves in the hole in her tooth, and how she waited for months for the pain to ease.

Years of improper oral hygiene in childhood led to complications in adulthood as well, resulting in tooth extractions, fillings, root canals, crowns, and periodontal treatment.

Her poor dental care as a child—stemming from a lack of education about oral health, prevention, and available resources—now drives her passion for oral health care.

"I became a dental hygienist because I think education is key," she says. "I also think having providers who speak the same language as their patients helps increase patient compliance and understanding."



Amber Lovatos, BSDH '13, RDH

Adjunct Assistant Professor, Department of
Periodontics and Dental Hygiene
UTHealth School of Dentistry



Lovatos organizes a variety of community outreach events, including oral screenings, dental care days, and educational events to teach oral hygiene.

It was this desire to help others, in addition to the need for financial security, that drew her to the field of science as a teenager. Today, she is a first-generation college graduate with a successful career, loving husband, and two teenage sons.

"My tenacity and ability to set goals and strive for those goals—even if I fail along the way—really helped me get to where I am," she says. "I have also been blessed to have a really good network of professionals who have supported me."

In turn, she encourages her fellow women of science to leave their mark on the world.

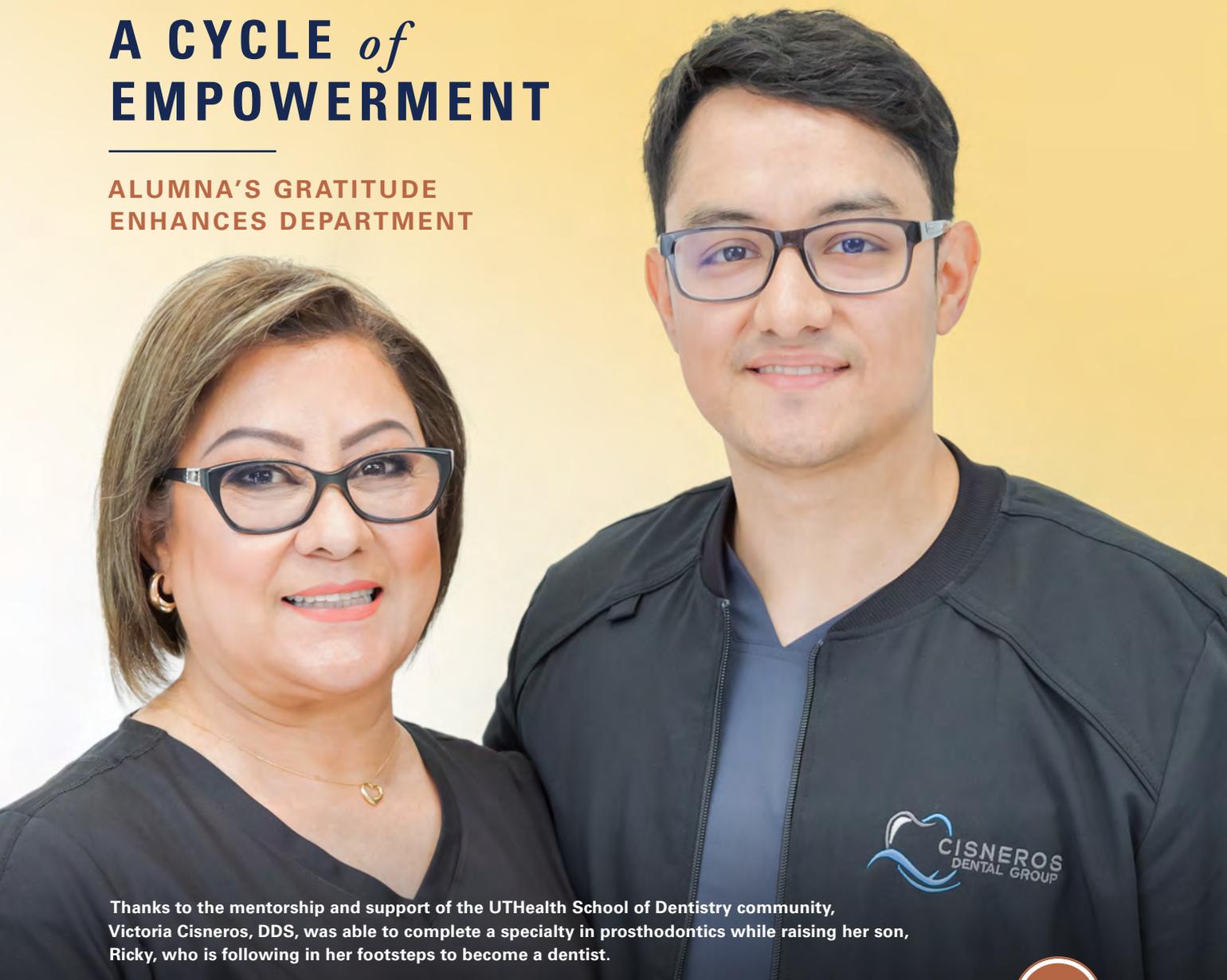
"Know that you have something to contribute and others have something to gain from you," she says. "Don't miss an opportunity because you are scared or lack confidence. The only one doubting you is you."

Now looking to the future, she is excited to continue serving others and ensuring that other children don't have to miss school due to issues like toothaches.

"I want to continue to make an impact whether that's through public speaking, my community outreach work, or instilling a passion in other professionals to give back to the community," she says.

A CYCLE *of* EMPOWERMENT

ALUMNA'S GRATITUDE
ENHANCES DEPARTMENT



Thanks to the mentorship and support of the UTHealth School of Dentistry community, Victoria Cisneros, DDS, was able to complete a specialty in prosthodontics while raising her son, Ricky, who is following in her footsteps to become a dentist.



As Victoria Q. Cisneros, DDS, balanced classes, labs, and clinics with family life, the women of UTHealth School of Dentistry proved themselves to be much more than classmates and faculty members.

Victoria enrolled in the school's Advanced Education Program in Prosthodontics later than most. More than a decade after earning her DDS at University of La Salle Bajio in Mexico, she had settled into life in Houston with her husband, Ricardo, and young son, Ricky.

"At the time, I didn't have anyone to take care of Ricky while I went to school. My husband worked nights at the airport, so he had to sleep during the day," Victoria says.

Catherine Flaitz, DDS, then Dean of the School of Dentistry, helped smooth the way by allowing Cisneros to bring Ricky to her 7 a.m. pathology class—which Flaitz taught—before dropping him off at school. Victoria's fellow students also stepped in to help, including Patricia Riano, DDS, who took Ricky to and from school when needed, and Amanda Echeverria, DDS, who would help bring him to the library for homework.

"I am so thankful for everyone who went out of their way for us," Victoria says.



Since graduating in 2003 and developing her own private practice, Cisneros Dental Group, Victoria has decided to give back to the program in a big way: pledging a substantial gift to the Department of Restorative Dentistry and Prosthodontics, with an endowment to be established now and an estate commitment to bolster the future of the program. In recognition of her generosity, the graduate clinic has been named the Victoria Q. Cisneros, DDS, MS, Advanced Prosthodontics Clinic.

“On behalf of our students, residents, faculty, and staff, I thank Dr. Cisneros for her generous support of UTHealth School of Dentistry,” says John A. Valenza, DDS. “Her gift will advance innovative patient care, education, and research for the Advanced Education Program in Prosthodontics and nurture the education of specialists like her for generations to come.”

This is Victoria’s second major gift to the School of Dentistry; she established the Veteran’s Oral Health Endowment in 2017 to honor members of her husband’s family who served in the military. That endowment also serves as a tribute to one of her mentors, Air Force veteran Robert L. Engelmeier, DMD, former Director of the Advanced Education Program in Prosthodontics, who went the extra mile for residents.

“I come from a family of giving, so helping others was normal for me growing up,” she says. “I also want to set an example for my son so he can continue to give back to the community.”

Thinking back on the women who helped her achieve her goals, Victoria remembers them well, especially Maria Gonzalez, DDS, now Associate Professor in the Department of Restorative Dentistry and Prosthodontics at the School of Dentistry, who helped a great deal with lab work during preceptor training. Victoria says completing the program would have proven very difficult without her.

However challenging it was, Victoria would not change a thing about her experience at the School of Dentistry, as it marked her path forward in life.

“I received so much from the school, and I wouldn’t be in the position I am now if it weren’t for that opportunity,” she says.



John A. Valenza, DDS '81

Dean
The William N. Finnegan III Distinguished
Professor in the Dental Sciences
UTHealth School of Dentistry

A HEALTHY



FOUNDATION

UTHEALTH PUBLIC HEALTH EXPERT SEEKS TO REMEDY CHILDHOOD OBESITY

The grocery store poses a familiar challenge to parents of young children. Aisles of unhealthy food sit right at a child's eye level, dazzling them with eye-catching packaging and promises of sugar-filled delights. With such readily available junk food and decreased activity levels across the United States, children as young as one face the rising threat of obesity.

"If we don't take care of obesity in childhood, we are setting up young adults for the risk of poor lifelong health," says Sarah Messiah, PhD.

Associated with increased risk of heart disease, diabetes, and other chronic health conditions, obesity now affects nearly one in five children, who often struggle with their weight for decades. In addition, children from certain populations—including low-income and minority groups who lack access to health resources—face greater hurdles in maintaining healthy weights.

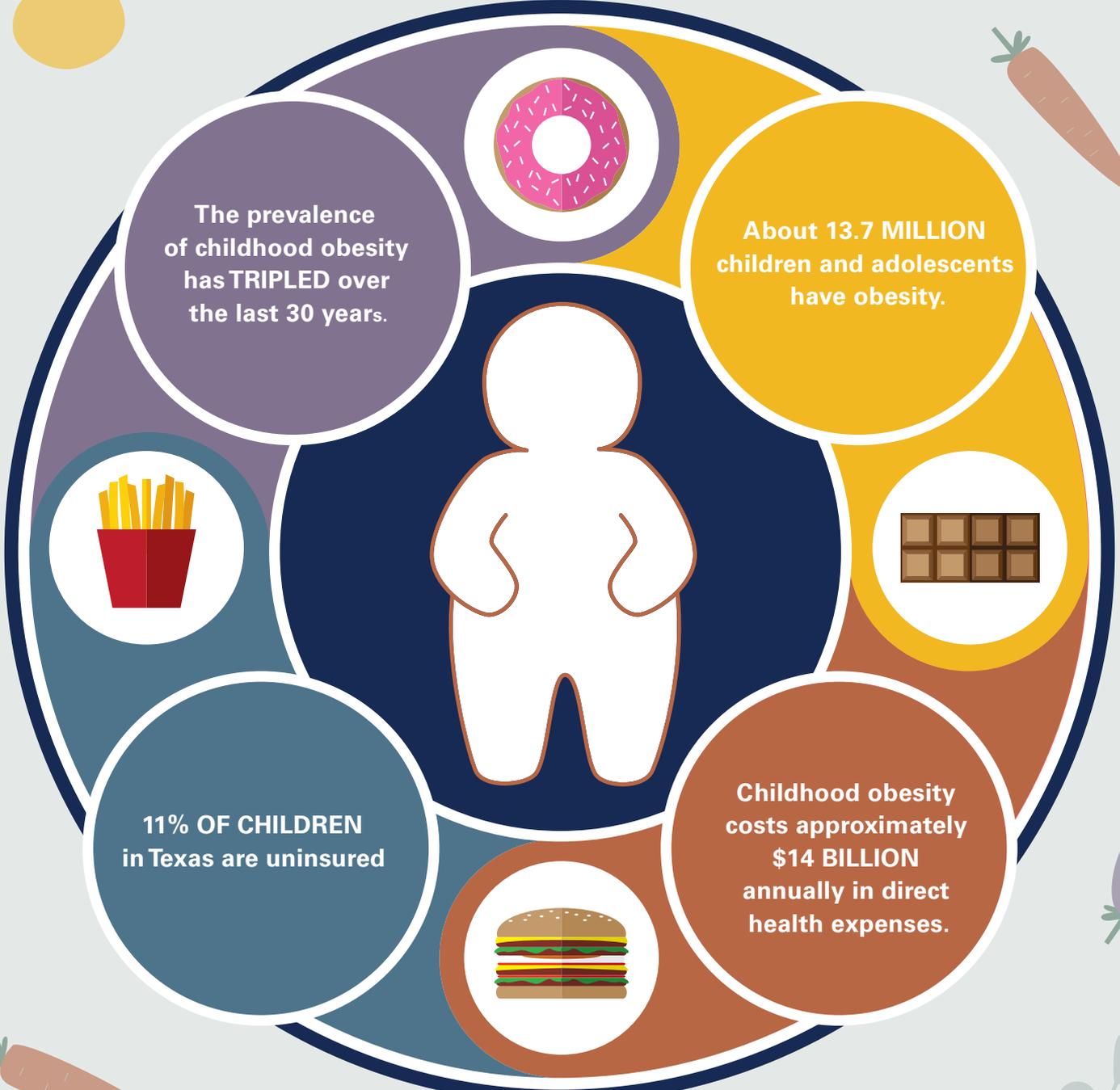
Because these children have health needs that often go unmet, Messiah and her team are working to develop and implement evidence-based programs to promote healthy weights in communities across Texas. From school activities to programs in health clinics, these initiatives are helping children become more active in their daily lives.

"Even simple programs like park-based after-school activities can make a difference," Messiah says. "Part of the challenge is ensuring these resources are accessible and affordable."

By creating interventions that are free or low cost, Messiah and her team are working to reach low-resource communities. But in order to solve the growing obesity problem throughout the United States, interventions may not be enough.

"Prevention is key for ensuring healthy childhood weights," Messiah says. "This is a big challenge because we can't simply avoid food—we have to eat to survive."

CHILDHOOD OBESITY

An infographic centered around a white silhouette of a child with a large belly, set against a dark blue background. The child is surrounded by six circular callouts in various colors (purple, yellow, blue, brown) containing text and food icons. The callouts are: a purple one with a donut icon, a yellow one with a chocolate bar icon, a blue one with a hamburger icon, a brown one with a french fry icon, a purple one with a donut icon, and a yellow one with a chocolate bar icon. The entire infographic is surrounded by various food icons like a tomato, broccoli, carrot, and pea.

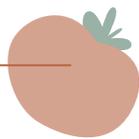
The prevalence of childhood obesity has **TRIPLED** over the last 30 years.

About **13.7 MILLION** children and adolescents have obesity.

11% OF CHILDREN in Texas are uninsured

Childhood obesity costs approximately **\$14 BILLION** annually in direct health expenses.

***All statistics are based in the United States.**



Children who learn to exercise and eat nutritious foods from a young age are more likely to grow up at healthy weights, but kids don't exist in a vacuum. The number one risk factor for childhood obesity is having parents who did not learn healthy habits themselves and also have obesity.

“We have to work with entire families and communities to ensure younger generations learn how to be healthy,” Messiah says.

“By helping both parents and children develop better nutrition and exercise habits, our prevention work can have a much broader impact.”

In 2020, the obesity epidemic collided with the COVID-19 pandemic, making life more complicated for children and adults trying to achieve healthy weights. With activity programs closing and more people relying on food for comfort, obesity levels have risen even higher, with potentially drastic health consequences.

“Obesity quickly emerged as a risk factor for severe COVID-19 illness,” says Messiah, who is part of the UTHealth COVID-19 Center of Excellence. “Because obesity often leads to other chronic health conditions, it is no surprise that COVID-19 has a greater effect on people with obesity.”

As a result, the pandemic's impact has put a spotlight on Messiah's efforts to solve obesity during a child's early years. “To really advance public health in the United States, we have to help people with obesity,” Messiah says. “And that begins in childhood, when even small interventions can have a tremendous impact.”



Sarah Messiah, PhD

Professor, Department of Epidemiology,
Human Genetics, and
Environmental Sciences
Director, Center for Pediatric
Population Health
UTHealth School of Public Health in Dallas



IN THIS TOGETHER

CARING FOR OUR COMMUNITIES DURING COVID-19

Between day care closures and social distancing measures, children's lives have been turned upside down by the COVID-19 pandemic. But if there is a silver lining for parents during this health crisis, it is that children seem to be less susceptible to the most dangerous effects of the virus.

"Children can certainly develop COVID-19, but many experience milder symptoms than adults," says Bela Patel, MD.

While children may not get as sick, they can still spread the virus to adults or other children, particularly those with underlying health conditions. In rare cases, some children may also develop a serious side effect called multisystem inflammatory syndrome, which can lead to life-threatening complications.



Bela Patel, MD

Graham Distinguished University Chair
Professor and Director, Division of
Critical Care Medicine
Department of Internal Medicine
Vice Dean of Healthcare Quality
McGovern Medical School at UTHealth

"As part of the ongoing efforts at UTHealth to keep the children and adults in our communities healthy during this crisis, we established the UTHealth COVID-19 Center of Excellence," Patel says. "Bringing together researchers from across our six schools, the center aims to provide the best clinical care, discovery science, and public health knowledge to light the path forward through the pandemic."

"Our goal at the COVID-19 Center of Excellence is to confront the ongoing pandemic from all angles," Patel says. "From optimizing treatments to conducting clinical trials, our experts are dedicated to saving lives and reducing long-term damage from the virus."

For some children and adults, COVID-19 can have lasting health consequences that affect the heart, lungs, and other parts of the body. The center's Post-COVID Adult and Pediatric Care Clinic at UT Physicians, the clinical practice of McGovern Medical School at UTHealth, provides comprehensive, leading-edge aftercare to patients of all ages.

To learn more about the UTHealth COVID-19 Center of Excellence and how you can make a difference, please visit:

UTH.EDU/COVID-19



NURTURING NEW GROWTH

HELPING CHILDREN FLOURISH DURING THE SHIFT TO REMOTE LEARNING



April Crawford, PhD

Co-Director, Children's Learning Institute
Associate Professor, Department
of Pediatrics
McGovern Medical School at UTHealth

School has looked a little different over the past year. As the COVID-19 pandemic took hold, living rooms quickly turned into classrooms, and parents transformed into teacher aides. For our youngest learners in their formative years, transitioning from learning in the classroom to learning at home can be difficult. Faculty and staff at the Children's Learning Institute at McGovern Medical School at UTHealth have made it their mission to help teachers and families navigate this arduous terrain as they nurture these promising seedlings.

"At our very core, our goal is to help children reach their full potential," says April Crawford, PhD. "We are dedicated to advancing learning and health outcomes, and we do that through a variety of public and private partnerships in research, resource development, clinical programs, and service delivery."

Crawford also leads the institute's state initiatives, including CLI Engage, an online platform launched in 2015 that offers free resources to a variety of early learning programs. As COVID-19 swept the world, CLI Engage became an important component in addressing the educational repercussions of the pandemic.

"Having the CLI Engage platform already available enabled us to respond quickly when the educational climate began to shift and schools began preparing for remote learning in 2020," says Jennifer Lindley.

Within a week of the transition to remote learning, faculty and staff at the Children's Learning Institute were using CLI Engage to cultivate the new online learning environment and to support educators and families. They focused on supporting teachers in three areas: lessons and curriculum, connection with parents, and professional development. They also expanded existing resources to include information related to COVID-19, such as how to explain the coronavirus to children and how to teach them about germs and hygiene.

Many resources on CLI Engage help educators partner with families so they can work together to support their child's development. Other resources are available for families to access directly from home.

CLI ENGAGE AREAS OF SUPPORT FOR TEACHERS



Lessons and curriculum



Connection with parents



Professional development

“Parents are children’s first and most important teachers,” Lindley says. “We want to engage families in their children’s education and support learning throughout the day by linking school-based learning—delivered by teachers—with home-based educational opportunities.”

One of the CLI Engage resources that helps link school-based learning and home-based learning is the CIRCLE Activity Collection: Family. Meant to foster meaningful education for young children, the collection is available in English and Spanish and provides suggested activities for families to complete together. The collection is closely linked to the classroom activity collection—available to more than 35,000 early childhood teachers, specialists, and administrators statewide—allowing children to learn the same concepts at school and at home.

The transition to remote learning was not the only hurdle the Children’s Learning Institute helped teachers and families overcome. Schools also faced the question of how to complete state-mandated progress monitoring assessments on students who were learning remotely. Once again, faculty and staff at the institute rose to the challenge. They developed trainings and released a video through CLI Engage that showcased how teachers and parents could work together to complete the assessment.

“I am inspired by the ingenuity and dedication our faculty and staff have shown over the past year,” says Tricia A. Zucker, PhD. “Most of all, I am encouraged by their passion to help our youngest learners. Each of us is here because we believe in our institute’s mission and the future of these children.”

Though it is not easy to cultivate resources to overcome the learning obstacles sown by a pandemic, it is rewarding to see children across Texas continue to grow and flourish with the proper support.

“This has been a challenging time for all of us, but we are grateful to support teachers and families to ensure children in our communities continue to learn and grow,” Lindley says.



Jennifer Lindley

Senior Program Manager, Communications
Children’s Learning Institute
McGovern Medical School at UTHealth



Tricia A. Zucker, PhD

Harriet and Joe Foster
Distinguished Professor
Co-Director, Children’s Learning Institute
Associate Professor, Department
of Pediatrics
McGovern Medical School at UTHealth



UT★Physicians

UT Physicians, a 501(c)(3) tax-exempt organization, is the clinical practice of McGovern Medical School at UTHealth. Our faculty offer urgent, highly specialized, or complex care to individuals and families in Houston and across Harris County and surrounding areas. Revenue from UT Physicians provides UTHealth with additional resources to support our faculty and further enhance the education of the health care professionals of tomorrow.



1.9M
PATIENT VISITS
TO CLINICS

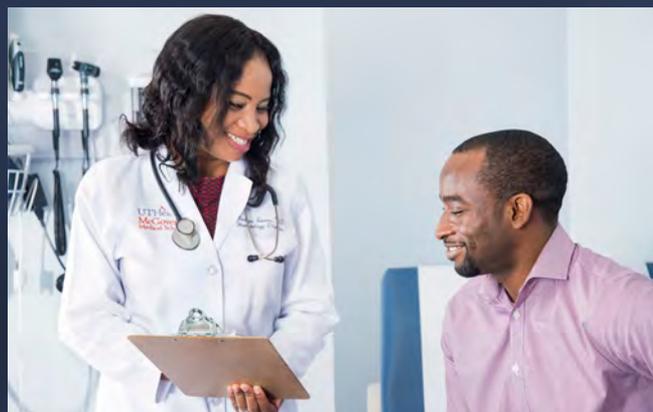


2,000+
PROVIDERS

80+
SPECIALTIES AND
SUBSPECIALTIES



100+
LOCATIONS



UTHealth
Neurosciences

UT★Dentists

UT★Health Services



UTHealth Neurosciences is a comprehensive academic and research-based program with more than 150 health professionals—including nationally recognized leaders—who are committed to improving the quality of life for people with neurological disorders.



UT Dentists is the multidisciplinary faculty practice of UTHealth School of Dentistry. Specialists and faculty dentists treat patients with every type of dental problem to improve oral health, which is essential to improving overall wellness.



UT Health Services is a nationally recognized nurse-managed primary care center through Cizik School of Nursing at UTHealth. Nurse practitioners provide patient care in collaboration with a McGovern Medical School physician.

PRIMARY TEACHING AND AFFILIATED HOSPITALS

Children's Memorial Hermann Hospital
Harris Health Lyndon B. Johnson Hospital
Memorial Hermann-Texas Medical Center

TIRR Memorial Hermann
The University of Texas MD Anderson Cancer Center
UTHealth Harris County Psychiatric Center

THANK YOU

Advancing women's and children's health is one of the many ways that UTHealth's community of experts is solving the greatest health challenges of our time.

To learn more about how we are discovering breakthrough advances in the prevention and treatment of disease, please contact:

UTHealth Office of Development

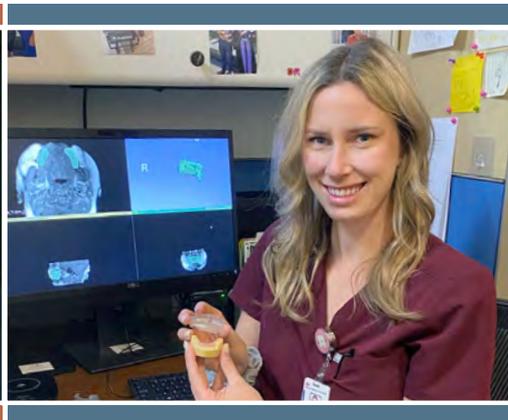
7000 Fannin Street, Suite 1200 | Houston, Texas 77030

713-500-3200

giving@uth.tmc.edu

www.uth.edu/giving

By supporting UTHealth, you help to create healthier lives. Together, we are on the frontier of discoveries that bring quality patient care to our communities.



EDUCATION



RESEARCH



PATIENT CARE

The mission of UTHealth is to educate health science professionals, discover and translate advances in the biomedical and social sciences, and model the best practices in clinical care and public health.

We pursue this mission in order to advance the quality of human life by enhancing the diagnosis, treatment, and prevention of disease and injury as well as promoting individual health and community well-being.

GO.UTH.EDU/WCHEALTH



MyUTHealth



UTHealth



MyUTHealth



UTHealth



UTHealth



UTHealth