The Division of Pediatric Emergency Medicine (PEM) is one of the largest divisions within the Department of Pediatrics at UT Southwestern. The Emergency Department has always been the entry point for the Hospital, and in times of uncertainty, it serves a vital role for operations. In the third year of the COVID-19 pandemic, the front-line faculty and staff continued to serve the hospital and the Department of Pediatrics, revising protocols and managing surges. Across the country, the census essentially returned to pre-COVID levels.

In the fall of 2022, pediatric emergency departments across the country struggled to manage extraordinary peaks not seen since the 2009 influenza epidemic. The high census was compounded by a lack of inpatient bed capacity, with a large number of boarding inpatient and intensive care unit (ICU) patients in emergency departments (EDs). In addition to these and challenges with short-staffing throughout hospital systems, EDs struggled to manage this all. Common predictive models for emergency department staffing were upended by a moderate census winter and a continuous influx of patients through December 2022, with the highest peaks in September, October, and November. Influenza, respiratory syncytial virus (RSV), and rhino/enterovirus infections climaxed simultaneously in the late summer and fall of 2022. The ED functioned as the safety net for outpatient and inpatient services, as we boarded patients requiring admission for medical, surgical, and behavioral conditions. The behavioral health crisis was steady, with continued challenges and regular peaks.

The faculty and PEM fellows provide clinical service at the Children’s Health Emergency Department, Dallas. Our 2022 patient volume increased from the preceding year. Dallas had 120,929 patient visits in 2022, up from 110,989 patient visits in 2021. This was an increase from 75,211 in 2020 and was closer to normal volume (130,375 in 2019). Staffing was provided primarily by faculty from the UTSW Division of PEM but was augmented by a number of Emergency Medicine physicians and advanced practice providers from UTSW as well.

The Children’s Health Emergency Department, Dallas, is the primary pediatric ED for Dallas. The ED serves as a major pediatric referral center and is the only American College of Surgeons-verified Level I pediatric trauma center in North Texas. As such, the ED provides pediatric trauma stabilization and resuscitation and plays a key role in the trauma network for North Texas. Division faculty also provide medical oversight and physician coordination for the Children’s Health transport team and Dallas County Emergency Medical Services.

The Division has been a member of the Pediatric Emergency Care Applied Research Network (PECARN) since 2019. Membership is limited to a handful of leading academic medical centers, with multicenter research studies making impactful changes in pediatric emergency medicine. PECARN is a significant step forward in research accomplishment for the Division, and Dallas continues to be one of the leading centers for patient enrollment in studies. In addition, our faculty are involved in numerous clinical research studies designed to advance patient care and knowledge for emergency conditions involving neurological diseases, respiratory problems, trauma, bedside ultrasound, prehospital care, and noninvasive monitoring.

The PEM Division plays a vital role in training pediatric emergency medicine fellows, pediatric residents, emergency medicine residents, family medicine residents, medical students, and advanced practice providers who will provide pediatric emergency care throughout the country. The Division’s well-established, ACGME-accredited pediatric emergency medicine fellowship program provides strong clinical, educational, and research training and plays a crucial role in clinical teaching. In 2022, UTSW continued to lead efforts in multicenter educational initiatives and transitioned some small-group, formal lectures to more simulation-based educational efforts with expanded use of the simulation centers.

Ongoing national/regional initiatives included the fifth PEMQBook national board review course, which had the highest attendance ever in December 2022, and PEM Talks, which is a semi-monthly educational series for primary care providers in North Texas. Local efforts include the core PEM Conference series, a semi-weekly joint ED-Radiology conference, simulation education, and various lectures given regionally. Attendings, fellows, residents, and medical students are encouraged to attend conferences.
Pediatric Emergency Medicine Division Leadership

Vincent J. Wang, M.D., M.H.A.
Professor
Division Chief

Mohamed K. Badawy, M.D.
Associate Professor
Medical Director

Kenneth Yen, M.D., M.S.
Associate Professor
Research Director

Jo-Ann Nesia, M.D., M.S.
Associate Professor
Fellowship Director

Pamela Okada, M.D., M.B.A., M.S.
Professor
Joint Pediatric Enterprise
Physician Lead, Experience

Beatrix Bansal, M.D.
Assistant Professor
Associate Medical Director

Michael Baldovsky, D.O., M.B.A.
Assistant Professor
Associate Medical Director

Megan Street, M.D.
Assistant Professor
Associate Medical Director

Craig Huang, M.D.
Associate Professor
Emergency Medicine Liaison,
Trauma Services at Children's Health

Sing-Yi Feng, M.D.
Associate Professor
Associate Fellowship Director

Geoffrey Lowe, M.D.
Assistant Professor
Assistant Fellowship Director

Michael Cooper, M.D.
Associate Professor
Ultrasound Director for Pediatrics
Emergency Medicine
Division Faculty
The Division has 35 faculty members, including seven part-time faculty members. Included in the group of part-time faculty members are two who are full-time but split their time with other Departments. Dr. Nielson is board certified in Emergency Medicine and Pediatric Emergency Medicine, spending half his time with each; and Dr. Yaklin is board certified in Palliative Care and Pediatric Emergency Medicine, spending 25% of his time on the Palliative Care service.

Saneea Almas, M.D.
Assistant Professor

Kevin Barnes, M.D.
Assistant Professor

Amy Cheng, M.D.
Assistant Professor

Kathleen Costello, M.D.,
M.P.H.
Assistant Professor

Jeannette Dodson, M.D.
Assistant Professor

Nakia Gaines, M.D.
Assistant Professor

Kymberly Gonzalez, M.D.
Assistant Professor

Alessandra (Lexi) Guiner-
da Silva, M.D.
Assistant Professor

Vicki P. Moore, D.O.
Assistant Professor

Lori B. Pandya, M.D
Assistant Professor

Kalpesh Patel, M.D.
Assistant Professor

David Rodriguez, M.D.
Assistant Professor

Susan Scott, M.D.
Associate Professor

Asha Tharayil, M.D.
Assistant Professor

Jennifer N. Tiller, M.D.
Assistant Professor

Hoi See Tsao, M.D., M.P.H.
Assistant Professor

Ngoc Van Horn, M.D.
Assistant Professor

Clay Yaklin, M.D.
Assistant Professor

Amy Z. Zhou, M.D., Ph.D.
Assistant Professor
New Faculty

We welcomed four new faculty to the Division in 2022.

Andrew Brooks, MD
Assistant Professor
M.D.
Augusta University – School of Medicine, Augusta, GA, 2018
Postdoctoral Training
Residency, Pediatrics
Dell Medical School Pediatrics, Austin, TX, 2018 – 2021
Interests: Medical Education, Cardiology emergencies

Tom Pham, MD
Assistant Professor
M.D.
University of Oklahoma College of Medicine, Oklahoma City, OK, 2018
Postdoctoral Training
Residency, Pediatrics
Phoenix Children’s Hospital/Maricopa Medical Center, Phoenix, AZ, 2018 – 2021
Interests: Global Health, Medical education

Kyle Schmucker, MD
Assistant Professor
M.D.
Texas Tech University Health Science Center, Lubbock, TX, 2016
Postdoctoral Training
Residency, Pediatrics
Baylor College of Medicine, Houston, TX, 2016 – 2019
Fellowship, Pediatric Emergency Medicine
UPMC Children’s Hospital of Pittsburgh, Pittsburg, PA, 2019 – 2022
Interests: Emergency Medical Services
Bethsabee Stone, MD  
Assistant Professor  
M.D.  
Tel Aviv University, Sackler School of Medicine, Tel Aviv, Israel, 2015  

**Postdoctoral Training**  
Residency, Pediatrics  
Jacobi Medical Center/Albert Einstein College of Medicine, Bronx, NY, 2016 – 2018  
Fellowship, Pediatric Emergency Medicine  
Boston Medical Center, Boston, MA, 2018 – 2021, Chief Fellow 2020-2021  
Fellowship, Point-of-Care Ultrasound (POCUS)  
Baylor College of Medicine/Texas Children’s Hospital, Houston, TX, 2021-2022  

**Interests:** Point-of-Care Ultrasound (POCUS)

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**Pediatric Emergency Medicine Administrative Team**

LoAn Pittman, MHA  
Administrative Coordinator  

Eric Le, MHA  
Sr Administrative Assistant II  

Grayson Guttmann  
Sr Administrative Assistant I

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**Voluntary Faculty**

Halim Hennes, MD, past Division Chief and Research Director, retired in February 2022. He continues to be engaged in research and mentorship as voluntary faculty and provides invaluable insight and advice to the current Division Chief, Research Director, and other senior leaders within the Division.

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**Honors / Awards / Distinctions**

Mohamed Badawy, MD  
- Co-Chair, Quality Safety and Intervention Committee (QUASI), PECARN network  
- Faculty mentor, PECARN future investigators forum  
- Best Faculty Abstract Award – Society of Academic Emergency Medicine
Michael Cooper, MD
• Promoted to Associate Professor

Sing-Yi Feng, MD
• Co-Chair, Diversity and Inclusion Subcommittee – UTSW Graduate Medical Education Committee
• Associate Program Director Representative - Steering Committee, Section on Emergency Medicine Program Directors Committee

Geoffrey Lowe, MD
• Named Fellowship Assistant Program Director

Jennifer McConnell, MD
• Fellow Representative – American Academy of Pediatrics - Section of Emergency Medicine Program Directors Committee

Jo-Ann Nesiama, MD
• Outstanding Senior Faculty Award – Pediatric Emergency Medicine Fellowship, UT Southwestern Medical Center
• Best Research Mentor – UT Southwestern Pediatric Residency Program (co-recognized with Dr. Ken Yen)

David Rodriguez, MD
• Outstanding Junior Faculty Award – Pediatric Emergency Medicine Fellowship, UT Southwestern Medical Center

Hoi See Tsao, MD, MPH
• Honorable Mention in NASEMSO Abstract Competition

Ngoc Van Horn, MD
• UTSW Pediatric Residency Faculty Teaching Award June 2022

Vincent J. Wang, MD, MHA
• Member, Sub-Board of Pediatric Emergency Medicine – American Board of Pediatrics, Durham, NC
• Member, Society of Pediatric Research

Kenneth Yen, MD, MS
• Best Research Mentor – UT Southwestern Pediatric Residency Program (co-recognized with Dr. Jo-Ann Nesiama)
• Best Faculty Abstract Award – Society of Academic Emergency Medicine
• Member, Society of Pediatric Research

**Significant Administrative Appointments**

Bharati Beatrix Bansal, MD
• Associate Medical Director, Children’s Dallas Pediatric ED, UT Southwestern Medical Center

Geoffrey Lowe, MD
• Disaster Medicine Liaison & Content Expert – Pediatric Emergency Medicine, UT Southwestern Medical Center

Jo-Ann Nesiama, MD
• President-Elect – UT Southwestern Faculty Senate

Ngoc Van Horn, MD
• General Pediatrics Faculty Lead for Simulation Education – UT Southwestern Medical Center
Invited Lectures

Mohamed Badawy, MD
- The International Medical Congress of Izmir Democracy University (IMCIDU), Izmir, Turkiye, December 2022
  o “Acute Phase Reactants in the Emergency Department: The Young Febrile Infant”

Michael Baldovsky, DO, MBA
- Texas Tech University Pediatric Resident Lecture, Lubbock, TX, July 2022
  o “Heat, Cold and Altitude Related Illness in Children”

Michael Cooper, MD
- Gary R. Fleisher Grand Rounds. Boston, Dallas, Denver, Columbus, multi-center virtual conference, January 2022
  o “Comparison of Management Protocols of DKA and HHS”
- Pediatric Emergency POCUS Educational Collaborative (PEPEC) Multicenter, Connecticut Children’s Medical Center, Hartford, CT, January 2022
  o “Interesting cases in pediatric abdominal point of are ultrasound”

Kathleen Costello, MD, MPH
- Gary R. Fleisher Grand Rounds. Boston, Dallas, Denver, Columbus, multi-center virtual conference, May 2022
  o “Caring for Child Victims of Human Trafficking: Education and Resources for Healthcare Providers”
- Texas College of Osteopathic Medicine, Fort Worth, TX, April 2022
  o “Human Trafficking: An Overview for Medical Students”

Sing-Yi Feng, MD
- AAP Section of Pediatric Emergency Medicine, PEM Landscape Course Series, October – December 2022
  o “The Golden Hour of Medicine”
- Pediatric Grand Rounds, UT Southwestern Medical Center, Dallas, TX, January 2022
  o “Toxicology and Classical Music: A Historical Perspective”
- Gary R. Fleisher Grand Rounds. Boston, Dallas, Denver, Columbus, multi-center virtual conference, February 2022
  o “Toxicology and Classical Music: A Historical Perspective”
- Qatar Pediatric Emergency Medicine International Conference, Doha, Qatar, March 2022
  o “Adolescent Opiate Use Disorder and Treatment”
- Annual Pills & Thrills that Kill! Toxicology in Review Conference, Texas Tech Health Science Center, El Paso, TX, April 2022
  o “Heavy Metals: Mercury, Arsenic and Lead”

Nakia Gaines, MD
- Texas Tech University Health Sciences Center, Lubbock, TX, May 2022
  o “Common Pediatric Injuries that Present to the ED”

Jo-Ann Nesiama, MD
- Children’s Care Provider Network. Dallas TX. September 2022.
  o Management of Fever in the ED.

Lori Pandya, MD
- Gary R. Fleisher Grand Rounds. Boston, Dallas, Denver, Columbus, multi-center virtual conference, October 2022
  o “Emergency Medical Services (EMS) in the United States: Past, Present, and Future”

Ngoc Van Horn, MD
- John Peter Smith Emergency Medicine Residency, Ft Worth, TX, January 2022
  o “Febrile Infant: Review in AAP Guidelines”
Kenneth Yen, MD
- Gary R. Fleisher Grand Rounds. Boston, Dallas, Denver, Columbus, multi-center virtual conference, March 2022
  - “Difficult Intra-venous Access (DIVA) in Children 15 years later: Have we moved the needle?”

Conference Presentations

Pediatric Academic Society
Denver, CO, April 2022

*Bolt J*, Patel F, Stone L, Pandian D, Gaines N.
Poster Presentation, “Impact of COVID-19 on Pediatric Mental and Behavioral Health Visits to the Emergency Department”

Brown SE, Tweedle J, Cooper M, Quaney K, Huang R, Nesiama J.

Chaudhari PP, Ugalde I, Badawy M, Ishimine P, Yen K, McCarten-Gibbs KA, Nielsen D, Atigapramoj NS, Tancredi DJ, Holmes JFJ, Kuppermann N.
Poster Presentation, “Clinician Characteristics Associated with Computed Tomography Use in Children with Minor Blunt Head Trauma”

Chotzoglou E, Nesiama J, Barksdale E, Yen K, Yang A.
Poster Presentation. “Developing and Implementing Research Workshops into Pediatric Residency Training.”

*Day C*, Diebel A, Oke O, Nesiama JO.
Poster Presentation, “Rural versus Urban Pediatric Firearm Injuries: A 10-year Review at a Level 1 Trauma Center”

Oral Presentation, “Validation of the PECARN Intra-Abdominal Injury Prediction Rule”

*Korattiyil M*, Abbe M, Eaton D, McKay S.
Poster Presentation, “Firearm Safety Counseling: A Comparison Between A Virtual Educational Platform and In-Person Workshop”

Poster Presentation, “Utility of Smart Device Infrared Camera in Localizing in Acute Pediatric Long Bone Fractures: A Pilot Study”

Poster Presentation, “Validation of the PECARN Traumatic Brain Injury Clinical Prediction Rule”

*Manuel MM*, Feng SY, Yen K, Patel F.
Poster Presentation, “The Agitated Pediatric Patient Located In the ED: The APPLIED Observational Study”

*Manuel MM*, Kambala S, Badawy M.
Poster Presentation, “Impact of COVID-19 Infection on Pediatric Acute Asthma Disease”
Poster Presentation, “Point-of-Care Ultrasound Comparison of Nil-Per-Os Gastric Volumes in the Pediatric ED”

*McBride K, Nesiama J, Reisch J, Solomon C, Badawy M.
Poster Presentation, “Randomized Controlled Trial Assessing the Utility of Video Physical Exam During ED to Inpatient Handoff for Patients with Bronchiolitis Admitted on Heated High Flow Nasal Cannula”

*Mehmood N, Nesiama J, Yen K, Lowe G.

Panda I, Hennes HM, Badawy M.
Poster Presentation, “Pediatric Outcomes after Emergency Medical Service (EMS) Non-Transport during the COVID-19 Pandemic”

*Shin J, Nadeem S, Park J, Hennes H.
Poster Presentation, “Effect of Urine Concentration in Identifying Urinary Tract Infection in Toddlers”

Ugalde I, Yen K, Holmes JF, Ishimine P, Chaudhari PP, McCarten-Gibbs KA, Badawy M, Atigapramoj NS, Kuppermann N.
Poster Presentation, “Incidental Findings on Computed Tomography in Children with Blunt Abdominal Trauma”

*van der Laan L, Van Horn N, Gaines N, Copley L.
Poster Presentation, “Procalcitonin as a Tool to Diagnose Bacterial Musculoskeletal Infections”

Yang AT, Okada PJ, Frost M.
Poster Presentation, “Resident Driven research program: multiyear assessment and current initiatives”

Yen K, Chaudhari PP, Ishimine P, Badawy M, Atigapramoj NS, Ugalde I, Holmes JFJ, Kuppermann N.
Poster Presentation, “Clinical Suspicion Compared to PECARN Prediction Rule for Clinical Important Traumatic Brain Injury (ciTBI) in Pediatric Patients with Minor Blunt Head Trauma”

Poster Presentation, “Clinical Suspicion Compared to PECARN Prediction Rule for Intra-Abdominal Injury undergoing Acute Intervention (IAIai) in Pediatric Patients with Blunt Torso Trauma”

Society of Academic Emergency Medicine
New Orleans, LA, May 2022

Oral Abstract Presentation, “Clinician Characteristics Associated with Computed Tomography Use in Children with Minor Blunt Head Trauma”

Plenary Presentation, “Validation of the PECARN Intra-Abdominal Injury Prediction Rule”

Ishimine P, Aigaramoj NS, Yen K, Ugalde I, Badawy M, Chaudhari PP, Upperman JS, Tancredi DJ, Kuppermann N, Holmes JF.
Oral Presentation, “Emergency Department Observation of Children with Abdominal Trauma”


PEMQBook Board Review Course 2022-23
Course Director: Craig Huang, MD
Course Co-Directors: Pamela Okada, MD, MS, MBA and Sing-Yi Feng, MD

December 9, 2022, Session #1:

Pam Okada, MD, MS, MBA
Lecture, “Neurological Emergencies”

Jo-Ann Nesiamo, MD, MS
Lecture, “Research Methods and Statistics I”

Beatrix Bansal, MD
Lecture, “Medically Complex Child”

Sing-Yi Feng, MD
Lecture, “Environmental Emergencies”

Craig Huang, MD
Lecture, “Pediatric Gynecology & Obstetrics”
Lecture, “Improving Test Performance”

Other Conferences

Wood WW, Dowling MM, Reisch J, Hennes H, Okada PJ
International Stroke Conference, New Orleans, LA, February 2022
“Pediatric Acute Stroke Team Activation: Differentiating Stroke From Mimics.”

Wood WW, Dowling MM, Reisch J, Hennes H, Okada PJ
Annual Aspen Conference on Pediatric Cerebrovascular Disease and Stroke, Snowmass Village, CO, July 2022
“Differentiating Pediatric Stroke from Stroke Mimics: A Time-Based Comparison”

Association of Pediatric Program Directors Conference, May 2022, San Diego, CA

Yang AT, El-Mikati H, Choutzoglou E, Burroughs C, Soffer S, Okada PJ, Frost MS
Platform Presentation, “Resident Driven Research Program: Multiyear Assessment and Current Initiatives”

Soffer S, Claussen K, Masserano B, Yang A, Okada, PJ, McKinney J
Abstract Presentation, “A Residency-led Cascading Mentorship Program towards Diversity in Pediatrics”
Abstract Presentation, “Building Board Preparation Support on a Budget”

Abstract Presentation, “Redesigning Academic Half Day”

Pre-Conference Workshop, “Biased Assessments: Helping Programs Identify and Address Bias and Support Diverse Trainees.”

Education and Training

The Division of Pediatric Emergency Medicine is a national leader in education. The Division continued its core efforts and further evolved and improved two initiatives started in 2021. Collaborating with Division Chiefs from three other centers, the Gary R. Fleisher Pediatric Emergency Medicine Virtual National Grand Rounds was established to be a forum for UTSW/Children’s Health, Harvard Medical School/Boston Children’s, Ohio State University/Nationwide Children's, and the University of Colorado/Denver Children’s to share the expertise of their faculty. In 2022, four faculty members from the UTSW Division of PEM presented at this national grand rounds forum. Similarly, UTSW initiated the All Texas PEM Fellowship Program meetings in 2021. Led by Dr. Jo-Ann Nesiama, the program director for UTSW, all four PEM fellowship programs meet quarterly to share educational lectures and expertise. UTSW faculty members continue to present at these quarterly meetings, which are well attended by the four PEM centers in Texas. Dr. Kim Van Horn continues to excel in her role as Education Director and is supported by Associate Education Directors Vicki Moore, DO, and Kymberly Gonzalez, MD. Until starting PEM fellowship in July 2022, Jennifer McConnell, MD also contributed as an Associate Education Director.

In 2022–23, the faculty members from the Division of Pediatric Emergency Medicine sponsored the 5th National Pediatric Emergency Medicine Question Review Book Board Review Conference, which is the largest PEM board review conference in the country. Through this conference, led by Drs. Pamela Okada, Craig Huang, and Sing-Yi Feng, faculty at UTSW helped teach the newest PEM attending physicians to pass the American Board of Pediatrics Pediatric Emergency Medicine Board certification examination. See the list of UTSW speakers in the conference presentation section of this report. The first three national conferences were held live and in person in 2015, 2017, and 2019 (conferences in 2015 and 2017 were held in Los Angeles, California). As with most conferences during the COVID pandemic, the 2021 course was transitioned to a virtual format, and had even higher attendance, with the typical three-day course divided into one-day sessions over three months. Similarly, the fifth course was divided into four separate one-day sessions over four months in 2022–23. In December 2022, the first session boasted more than 120 attendees, which is the highest ever.

In addition, the latest edition of the Pediatric Emergency Medicine Question Review Book (PEMQBook) is still widely read and is included in the curriculum of many PEM fellowship programs. The book’s lead editor is Dr. Vincent J. Wang. The cover is pictured below:
The next edition of the PEMQBook is in preparation, with anticipated release in June 2023, and the lead editors are Drs. Sing-Yi Feng and Craig Huang, joined by Dr. Neil Uspal from Seattle. Numerous faculty members in the Division of PEM are authors, as Drs. Feng, Huang, and Uspal lead a national collection of authors from across the country.

Pictured alongside the PEMQBook cover above is the cover of the second edition of the “Fleisher and Ludwig 5-Minute Pediatric Emergency Medicine Consult.” In progress is the third edition of the “Fleisher and Ludwig 5-Minute Pediatric Emergency Medicine Consult,” which was planned in 2022, with chapter due dates beginning in late 2022. Dr. Vincent J. Wang is the Co-Editor-in-Chief and Managing Editor, with planning beginning in 2022 and work ongoing in 2023. The next edition gives every faculty member and fellow the opportunity to author at least one book chapter and brings national attention to UTSW as a leader in education. In addition, Dr. Pamela Okada was able to join as one of the editors.

The Division of Pediatric Emergency Medicine sponsors “PEM Talks.” PEM Talks was originally developed to offer education on various pediatric emergency medicine topics to referring physicians. With the transition to virtual conferences during the COVID-19 pandemic, primary care providers, advanced practice providers, and nurses from all over North Texas are now attending, with participation recorded from Oklahoma, Georgia, Ohio, Iowa, New Mexico, North Carolina, Massachusetts, and Ontario, Canada. These talks further demonstrate the essential role of the Division of Pediatric Emergency Medicine as an educational leader in North Texas and beyond. Lectures are given from the media studio at Children’s Health, Dallas. Drs. Pamela Okada and Megan Street continue to direct these conferences, and they invite lecturers based on needs in the community. Most lectures are given by UTSW faculty. For 2022, the lectures given by PEM faculty are as follows (see the complete list below):

<table>
<thead>
<tr>
<th>Lecturer</th>
<th>Title</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael Baldovsky</td>
<td>Pediatric Dental Emergencies</td>
<td>February 2, 2022</td>
</tr>
<tr>
<td>Craig Huang</td>
<td>Bites, Bumps, Blotches, Dots, Spots, and Splotches: A Pediatric EM Doctor’s Guide to Rashes</td>
<td>February 16, 2022</td>
</tr>
<tr>
<td>Jo-Ann Nesia</td>
<td>Recent Fever Guidelines: Historical Context and Updates</td>
<td>March 2, 2022</td>
</tr>
<tr>
<td>Kathleen Costello</td>
<td>Caring for Child Victims of Human Trafficking: Education and Resources for Health Care Providers</td>
<td>April 6, 2022</td>
</tr>
<tr>
<td>Jeannette Dodson</td>
<td>Pediatric Sepsis: Early Recognition, Treatment, and Future Directions</td>
<td>June 1, 2022</td>
</tr>
<tr>
<td>Sing-Yi Feng</td>
<td>Care of the Acutely Agitated Patient</td>
<td>June 22, 2022</td>
</tr>
<tr>
<td>Amy Zhou</td>
<td>Pediatric Headache: When Should We Worry and What to Do About It</td>
<td>July 6, 2022</td>
</tr>
<tr>
<td>Geoffrey Lowe</td>
<td>Common Pediatric Orthopedic Injuries</td>
<td>September 7, 2022</td>
</tr>
</tbody>
</table>
In collaboration with the Division of Pediatric Radiology, the ED continues holding semi-weekly joint ED-Radiology conferences, reviewing interesting recent cases and topics. Attendings, fellows, residents, and medical students are encouraged to attend this focused educational conference. Dr. Mohamed Badawy leads the PEM effort, and Dr. Jeanne Joglar leads the Radiology effort.
Continuing in 2022, the monthly didactic series titled “Core PEM Conferences” focused on completing the Pediatric Emergency Medicine clinical lecture curriculum over two years. The topics are also of relevance to the UTSW Emergency Medicine faculty, as well as the advanced practice providers in the ED. Similarly, continuing through September 2022, residents and medical students attended semi-weekly small group lectures. In September 2022, Dr. Van Horn became the Simulation Lead for the General Pediatric Residency Program, and a greater emphasis was placed on simulation education. Dr. Susan Scott also continues her role in simulation education for fellows in the Division of PEM. Simulation education sessions at the Children’s or UTSW simulation centers is provided for General Pediatrics, Family Medicine, Emergency Medicine, and Pediatric Emergency Medicine programs at UTSW. In addition, the Division has invested in high-fidelity simulation manikins that are brought to the ED for simulation education.

The Division provides additional ongoing educational opportunities for medical students, residents, and advanced practice providers in addition to its fully accredited fellowship program. Education is a group effort with multiple contributors and includes other didactic lectures covering various topics in PEM, simulation labs for enhancing clinical and procedural skills, small group discussions, and bedside teaching in the ED.

In 2022, Dr. Kim Van Horn received the UTSW Pediatric Residency Faculty Teaching Award from the Department of Pediatrics. This recognition was well-deserved after years of regular recognition for her teaching efforts in the ED. In 2022, Dr. Susan Scott received the Division of PEM Teaching Award, as determined by rotating residents in the ED.

Medical Students

The Pediatric Emergency Medicine faculty and fellows are active in providing didactic education to UT Southwestern medical students. The Division offers a third-year medical student rotation and a fourth-year medical student clerkship that provides in-depth exposure to pediatric emergency medicine through recognition, evaluation, and management of the acutely ill and injured child. Dr. Kymberly Gonzalez, graduate of UTSW Medical School and the UTSW General Pediatric Residency Program, leads medical student efforts with the support of Drs. Kim Van Horn, Jennifer McConnell (graduate of UTSW Medical School), Vicki Moore (graduate of UTSW General Pediatric Residency Program), Gordon Bruce (graduate of UTSW Medical School and UTSW General Pediatric Residency Program), Kayleigh McBride, and many others in the Division. Dr. Gordon Bruce contributed until his retirement in June 2022, Dr. Jennifer McConnell contributed until the start of her PEM fellowship in July 2022, and Dr. Kalyleigh McBride contributed until graduating PEM fellowship in June 2022. Highlights include:

- Second- and third-year medical students’ experiences are a combination of shadowing and direct patient management, including multiple case history and physical examination presentations on patients in the ED, directly supervised by attending physicians.
- Second- and third-year medical students were issued a “passport” to guide and document their experience in the pediatric ED. The passport is similar to a travel passport with the various patient experiences documented in the booklet. The passport images are as noted below.

![Passport Image](image-url)
• Fourth year medical students’ clerkship experiences were divided between the moderate and higher acuity areas. The students present directly to the attending physician on the high acuity team.
Residents

Major internal educational activities include didactic lectures for the Pediatric, Family Medicine, and Emergency Medicine residents. Training in the emergency department is often sought by residents from other pediatric training programs in Texas.

The objectives of the rotation and the educational efforts are to:

- Recognize, evaluate, and manage acutely ill and injured pediatric patients
- Evaluate and manage common pediatric complaints and disease processes
- Master technical skills, including lumbar puncture, laceration repair, fracture care and splinting, foreign body removal, and incision and drainage
- Acquire and maintain the efficiency and prioritization required to care for multiple patients simultaneously
- Focus on proficiency in the core competencies: common complaints, disease processes, and technical skills
- Emergency Medicine residents and PEM fellows also participate in procedural sedation as learners

Educational opportunities include:

- Pediatric Emergency Medicine lectures at residents’ conferences (variable over the year)
- Semi-weekly didactic lectures on various pediatric emergency medicine topics through September 2022
- Pediatric Emergency Medicine core lectures (second Wednesdays)
- Joint Emergency Medicine-Radiology conferences (every Tuesday and Thursday)
- Participation at Pediatric Emergency Medicine Fellows’ meetings (every Wednesday)
- Bedside teaching on the diverse patient population

A new Emergency Medicine residency program from Baylor University Medical Center began sending their residents in 2021 and expanded with another eight residents in 2022. The Parkland Emergency Medicine residency program also expanded their class size by four per year beginning in 2021.

Fellows

The well-established Pediatric Emergency Medicine Fellowship Program provides excellent clinical training and includes a comprehensive research curriculum with didactic teaching that covers basic research concepts and statistics. The program also supports an extensive teaching curriculum to promote their individual growth as educators. The program strives to prepare the fellows to be outstanding clinician-educators while training them to lead our future in pediatric emergency medicine. They are also encouraged to complete two research projects by graduation.

The Division currently has 12 full-time fellows, each with diverse research and administrative interests.

Jacqueline Bolt, MD
3rd year PEM Fellow
Chief Fellow

Noormah Mehmood, MBBS
3rd year PEM Fellow

John Shin, MD
3rd year PEM Fellow

UT Southwestern Medical Center
The fellowship continues to be competitive, matching three candidates for the academic year beginning July 2023, attracting candidates from Dallas, New York City, and Virginia. Due to having five fellows match in 2022, we had three fellowship positions in 2023.

Division faculty have diverse research interests, offering the fellows a unique opportunity to select the appropriate mentor with interests that match theirs. The Research Directors and Research Council assist faculty and fellows with their research projects, and the Fellowship Director has a Master of Epidemiology, along with the Research Director (Dr. Ken Yen).

**Research Activities**

The Division of PEM serves a diverse population with broad pediatric pathology and high acuity, providing an opportune environment for clinical research. The mission of the Division is to conduct state-of-the-art clinical research with an emphasis on improving the clinical care and outcomes of acutely ill or injured children. The pillars of the research program in the Division include trauma, EMS/pre-hospital management, pain management, clinical decision rules, respiratory care, and neurologic emergencies.

Because of its rich clinical service and broad research interests, the Division has been routinely selected to participate in multicenter, national, and international level-studies. The research team has a proven track record of success by becoming one of the top enrolling sites for numerous multicenter, federally funded studies. In 2022, our faculty and fellows have seven funded prospective studies: four funded PECARN studies and three funded non-PECARN studies (sources: Children’s Health; International: Calgary, Canada and Australia; and one multi-center trauma study). There are five ongoing multicenter retrospective Non-PECARN studies and numerous intramural studies at UTSW.
This is the fourth year the Division has been a PECARN center. PECARN is a federally funded research network that conducts high-priority, multi-institutional research in pediatric emergency medicine. Being selected as a PECARN site is a high honor for the Division. At the close of 2022, there were three active PECARN NIH-funded studies ongoing (one concluded enrollment earlier in 2022). **Dr. Mohamed Badawy** continues his vital role as our PECARN Site PI. Dr. Halim Hennes had served as co-PI until his retirement in February 2022, but he continues to volunteer with related research and PECARN administration. The primary PECARN grant provides support for a full-time research coordinator and 0.1 FTE for the site primary investigator. The PECARN, as part of its mission, offers a mentoring workshop for junior investigators. The workshop objective is to assist young investigators in developing a research project appropriate for future funding. In 2022, **Dr. Amy Cheng** presented a research project on bronchiolitis and is currently working on a pilot study to collect data in preparation for submitting a multicenter project.

Active grants increased from $287,265 in 2019 to $626,334 in 2020, $718,441 in 2021, and $590,318 in 2022, as shown in the graph below:

![Active Grant Funding Graph](image)

The research infrastructure includes two full-time research coordinators and five full-time and part-time research assistants (RAs). Research assistant support is present in the Emergency Department 16 hours per day. Research staffing is expected to grow in 2023 with the additional RAs.

The Division’s Research Council reviews and oversees all PEM research. The council is led by **Dr. Kenneth Yen**, the Research Director, and is composed of the Division Chief, Research Directors, Fellowship Director, Associate Fellowship Director, Research Coordinator, a member of the Emergency Medicine nursing management and education staff, and select senior PEM faculty. Dr. Halim Hennes also participates even in his retirement. **Amy Zhou, M.D., Ph.D.** is a junior member of the Research Council. The PEM Research Council’s purpose is to review and oversee all PEM research development and implementation, advising faculty interested in initiating research projects in the ED, and guiding the division research staff in prioritizing implementation. Dr. Kenneth Yen focuses on institution-initiated research in his role as Research Director.

Even with the COVID-19 pandemic, the Division of Pediatric Emergency Medicine continued to focus significant efforts on research. In comparison to previous years:

- **2022**: the Division published 18 original research publications, with two additional ePublications ahead of print
- 2021: the Division published 21 original research publications
- 2020: the Division published 17 original research publications
- 2019: the Division published 15 original research publications
- 2018: the Division published 12 original research publications
Additionally, several case reports/series and a review article were published last year but were not counted as the articles heretofore mentioned. Please see the bibliography at the end of this report.

**Clinical Activities**

Pediatric Emergency Medicine faculty and fellows provide emergency medicine services at Children’s Health, Dallas. In 2022, the Division of Pediatric Emergency Medicine continued to serve as the entrance point for Children’s Health efforts in the COVID-19 pandemic as the flagship Pediatric Emergency Department in Dallas. Over the course of the pandemic, the ED continued to refine systems and protocols, maintaining flexibility to unusual trends over the course of the year. Administrative challenges continued throughout 2022 as typical predictive models weren’t as reliable as previous models.

Pediatric emergency departments across the country appeared to return to pre-pandemic census levels in 2022. In the fall of 2022, colleagues across the country reported struggling to manage the extraordinary peaks which were compounded by a lack of inpatient bed capacity. With a large number of boarding inpatient and ICU patients in the ED, a high census, and challenges with short-staffing throughout hospital systems, pediatric EDs across the country struggled to manage this. Common predictive models for emergency department staffing were upended by a moderate census winter and a continuous influx of patients from March 2022 through December 2022, with the highest peaks in September, October, and November. Reports from other centers demonstrated left-without-being-seen rates as high as 50% on some days. Similarly, in Dallas, influenza, RSV, and rhino/enterovirus infections climaxed simultaneously in the late summer and fall of 2022, as the Children’s Health Emergency Department, Dallas, managed overflow for the ICU and inpatient services, which were at capacity due to bed and nursing shortages. The ED continued to function as the safety net for outpatient and inpatient services as we boarded patients requiring admission for medical, surgical, and behavioral conditions. The behavioral health crisis was steady, with continued challenges and regular peaks.

The faculty and nurses in the Emergency Department have done an excellent job navigating the unknown, while still providing the typical, expected emergency care. As physician and nursing staffing became challenged with a national healthcare worker shortage, accompanied by quarantines due to COVID-19 infections, 2022 was more challenging for different reasons than the original difficulties of the COVID-19 pandemic.

**Dr. Mohamed Badawy** serves as the Medical Director of Children’s Health Emergency Department, Dallas, and **Drs. Beatrix Bansal, Megan Street, and Michael Baldovsky** serve as Co-Associate Medical Directors.

- Our 2022 patient volume was 120,929 patient visits, which was higher than 2021 (110,986).
- The overall ED admission rate was 11.2% (13,523).
  - 45% of all hospital admissions originated from the Emergency Department in 2022.
  - Among admissions, 13.4% (1,811/13,523) were admitted to one of the ICUs, reflecting a relatively large number of acutely ill and injured children.

The number of high-acuity/high-morbidity patients remained disproportionately higher:

- Emergency Severity Index (ESI) (triage index)
  - ESI 1/2/3 (higher acuity):
    - 66,836 in 2022 (56% of all patients)
    - 58,982 in 2021 (53% of all patients)
    - 43,089 in 2020 (58% of all patients)
    - 63,483 in 2019 (49% of all patients)
  - ESI 4/5 (lower acuity):
    - 52,312 in 2022 (44% of all patients)
    - 51,201 in 2021 (46% of all patients)
    - 32,122 in 2020 (42% of all patients)
    - 66,886 in 2019 (51% of all patients)
- Deaths in the ED: 31 (32 in 2021)
The Dallas ED is the only Level 1 pediatric trauma center in North Texas, and pre-COVID, it was one of the busiest pediatric emergency medicine clinical services in the country. We also provide emergency care for a variety of complex problems in children with special health care needs.

One pediatric emergency medicine faculty member, Dr. Sing-Yi Feng, is also a board-certified toxicologist. She manages a Lead Poisoning Clinic at Children’s Health and provides toxicology consultation services at Children’s Health, Parkland Memorial Hospital, and Clements University Hospital.

### Patient Statistics

Emergency Medicine patient visits by location by volume and length of stay by year:

<table>
<thead>
<tr>
<th>Dallas Emergency Department</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Volume</td>
<td>130,369</td>
<td>75,210</td>
<td>110,989</td>
<td>120,929</td>
</tr>
<tr>
<td>ESI 1, 2, 3</td>
<td>62,769</td>
<td>42,980</td>
<td>58,982</td>
<td>66,836</td>
</tr>
<tr>
<td>ESI 1, 2, 3: Median Length of Stay</td>
<td>269</td>
<td>220</td>
<td>270</td>
<td>339</td>
</tr>
<tr>
<td>ESI 4, 5 (lowest acuity)</td>
<td>66,886</td>
<td>32,122</td>
<td>51,201</td>
<td>52,312</td>
</tr>
<tr>
<td>ESI 4, 5 Median Length of Stay</td>
<td>188</td>
<td>131</td>
<td>181</td>
<td>264</td>
</tr>
<tr>
<td>Total admissions</td>
<td>13,973</td>
<td>10,748</td>
<td>14,982</td>
<td>13,523</td>
</tr>
<tr>
<td>% of admissions through ED</td>
<td>Not available</td>
<td>56%</td>
<td>58%</td>
<td>45%</td>
</tr>
<tr>
<td>Behavioral Health Patients</td>
<td>2,637</td>
<td>2,501</td>
<td>3,647</td>
<td>3,177</td>
</tr>
<tr>
<td>% of total admissions</td>
<td>2.0%</td>
<td>3.3%</td>
<td>3.3%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Transfers to a Critical Care Unit</td>
<td>1,254</td>
<td>1,162</td>
<td>1,434</td>
<td>1,811</td>
</tr>
<tr>
<td>Deaths in the ED</td>
<td>20</td>
<td>27</td>
<td>32</td>
<td>31</td>
</tr>
<tr>
<td>Annual LWBS</td>
<td>6.8%</td>
<td>0.8%</td>
<td>5.1%</td>
<td>11.6%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dallas Emergency Department Trauma Statistics</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trauma Stat activation</td>
<td>90</td>
<td>90</td>
<td>124</td>
<td>155</td>
<td>137</td>
</tr>
<tr>
<td>Trauma Alert activation</td>
<td>321</td>
<td>318</td>
<td>350</td>
<td>555</td>
<td>401</td>
</tr>
<tr>
<td>Trauma Consult</td>
<td>386</td>
<td>365</td>
<td>356</td>
<td>511</td>
<td>393</td>
</tr>
<tr>
<td>Trauma Admission</td>
<td>1,214</td>
<td>1,185</td>
<td>1,178</td>
<td>1,479</td>
<td>1,220</td>
</tr>
</tbody>
</table>

The census increased in 2022, compared to 2021, and was closer to 2019 metrics. Total admissions appear more similar to 2019, which reflects a normalization of our metrics compared to pre-COVID. Trauma activations in 2022 remain high, although they are lower than in 2021.

LWBS is a metric that is dependent on the overall census and staffing (physicians and nurses). In 2020, the census dropped, and staffing improved relative to census. However, as shown in the table, the census returned while staffing was challenged with resignations of faculty, nurses, and other ancillary support within the ED. LWBS increased as a result.

### ED Rennovation

The Emergency Department at Children’s Health, Dallas, had undergone a four-year ED renovation, largely completed in September 2022. Due to space constraints, the ED had been renovated while working alongside existing space rather than completing the ED renovation and then moving to the new ED. In each of the last three years, the ED has undergone three major phases and has rerouted patient care to accommodate these changes. As a result of these changes, the ED managed patients in four separate patient care areas through September 2022, with the distance end-to-end for the ED being the length of two football fields, on two different levels, with two different patient entrances. With the construction nearly complete, the length of the ED is now a single football field on two levels with separate patient
entrances. Patient flow has improved as a result, but some challenges remain. The remaining areas of construction are two patient rooms and a discharge lounge.

**Telemedicine Program**

The TeleER program started in 2015 and has evolved over the past 24 months, especially as pediatric emergency visits have dropped across the nation. Consults decreased in 2020 and 2022.

**Current Grant Support**

**Mohamed Badawy**
- **Grantor:** Seattle Children’s Hospital - Health Resources and Services Admin
- **Title of Project:** PECARN (Pediatric Emergency Care Applied Research Network)
- **Role:** Principal Investigator
- **Funding:** $143,934
- **Dates:** 09/2022 – 08/2023

- **Grantor:** NIH – NICHD
- **Title of Project:** Validation of Decision Rules for CT Use in Children with Abdominal or Head Trauma
- **Role:** Principal Investigator
- **Funding:** $12,869
- **Dates:** 06/2020 – 05/2022

**Michael Baldovsky**
- **Grantor:** University of Calgary - Canadian Institutes of Health Research
- **Title of Project:** Household Transmission Dynamics and Viral Load among Asymptomatic SARS CoV-2 Infected Children
- **Role:** Principal Investigator
- **Funding:** $16,500.00
- **Dates:** 01/2021 – 5/2022

**Amy Cheng**
- **Grantor:** UTSW Internal
- **Title of Project:** HFNC Initiation Flow Rate Study - A Single Center, Randomized Controlled, Feasibility Study
- **Role:** Principal Investigator
- **Funding:** $10,000
- **Dates:** 09/2020 – 08/2022

- **Grantor:** NIH – NHLBI
- **Title of Project:** Derivation and Validation of the Pediatric Community-Acquired Pneumonia Severity (PedCAPS) Score
- **Role:** Principal Investigator
- **Funding:** $12,955/yr
- **Dates:** 04/2023 – 03/2026

**Jeanette Dodson**
- **Grantor:** Children’s Hospital of Philadelphia NIH-National Inst of Chld Hlth & Hmn Dev
- **Title of Project:** PRagMatic Pediatric Trial of Balanced versus NOrmaL Saline FLUid in Sepsis (PRoMPT BOLUS)
- **Role:** Principal Investigator
- **Funding:** $24,264
- **Dates:** 09/2020 – 08/2025
Sing-Yi Feng
   Grantor: American Academy of Clinical Toxicologists Trainee Research Award
   Title of Project: Bedside Ultrasound Evaluation and Indicators of Progression in Crotalid Snakebites
   Role: Co-investigator
   Funding: $450 for this year
   Dates: 08/2019 – 08/2024

Jo-Ann Nesiama/Sing-Yi Feng
   Grantor: Texas Higher Education Coordinating Board: Emergency and Trauma Care Education Partnership Program
   Title of Project: Trauma Education for Pediatric Emergency Medicine Fellows
   Role: Project Lead
   Funding: $145,392
   Dates: 7/2022 – 6/2024

Geoffery Lowe
   Grantor: NIH
   Title of Project: Pediatric Dose Optimization for Seizures in EMS (PediDOSE)
   Role: Site Principle Investigator
   Funding: $192,880
   Dates: 08/2022 – 07/2023

Pamela Okada
   Grantor: Columbia University/NIH – National Institute of Neurological Disorders and Stroke
   Title of Project: Headache Assessment of Children for Emergent Intracranial Abnormalities – YR2
   Role: Principal Investigator
   Funding: $57,621
   Dates: 07/2021 – 06/2022

Kenneth Yen
   Grantor: Nationwide Children’s Hospital - NIH: NICHD
   Title of Project: Development and Testing of a Pediatric Cervical Spine Injury Risk Assessment Tool
   Role: Principal Investigator
   Funding: $16,800
   Dates: 08/2021 – 06/2022

   Grantor: Children’s Health Foundation – Mission Grant
   Title of Project: Pediatric Compensatory Reserve Index (CRI) studies: Part 1 Assessing Dehydration with Compensatory Reserve Index (CRI) Monitoring in Children with Vomiting and Diarrhea; Part 2 Epic Sepsis Alert/Concern for sepsis in a child and the Compensatory Reserve Index (CRI) Pilot
   Role: Principal Investigator
   Funding: $125,000
   Dates: 04/2021 – 09/2022
Publications
Journals: Original Research


Online Publications (ahead of print)


Review Articles


Case reports/series, Statements


Pediatric Emergency Medicine Team

Christmas 2022