**Division Introduction**

The Division of Pediatric Respiratory Medicine at UT Southwestern is committed to improving the health of infants, children, and young adults by providing quality clinical services, furthering the understanding of respiratory illnesses through original research, and participating in the education of physicians at all levels.

Under the interim direction of Philip Shaul, M.D., Professor and Vice Chair of Research, the Division’s eleven physicians and a number of associated health care professionals work together to form a truly multidisciplinary program.

The Pediatric Respiratory Medicine Division provides care to infants and children with a wide spectrum of respiratory illnesses, including disorders of respiratory control, the chest wall, and respiratory muscles, airway and lung parenchyma, and cystic fibrosis at Children’s Health™.

Varied research interests include how the nervous system influences the structure and function of the airways, acute lung injury, mechanical ventilation, near-fatal asthma, pulmonary outcomes in neuromuscular disease, pulmonary complications of sickle cell disease, respiratory consequences of early-onset scoliosis, and molecular mechanisms that regulate lung development.

Our faculty is committed to the education and training of medical students, residents, and fellows. Our Pediatric Pulmonology Fellowship Program prepares pediatricians to be experts in pulmonary medicine through a combination of educational activities, competencies, and assessment methods.

**Faculty**

The Division has six full-time and five part-time faculty members and four fellows, all with varied interests in clinical and translational research. Dr. Michelle Caraballo joined the faculty in 2015.

**Michelle Caraballo, M.D.**  
Assistant Professor

B.S., magna cum laude  
Bioengineering, Rice University, Houston, TX, 2004

M.D.  
UT Southwestern, 2008

**Postdoctoral Training**  
Internship and Residency, Pediatrics  
UT Southwestern/Children’s, 2008-2011

Fellowship, Pediatric Pulmonology  
University of Colorado Denver School of Medicine, 2011-2013, 2014-2015

Fellowship, Sleep Medicine  
University of Colorado Denver School of Medicine, 2013-2014

**Interests**  
Sleep-related breathing disorders, narcolepsy and asthma
Honors / Awards

Steven Copenhaver
- Best Pediatric Specialists in Dallas, *D Magazine*
- Texas Super Doctor, *Texas Monthly Magazine*

Andrew Gelfand
- Best Pediatric Specialists in Dallas, *D Magazine*
- Texas Super Doctor, *Texas Monthly Magazine*

Devika Rao
- Appointed Medical Director, Pulmonary Function Testing Lab, Children’s Health™

Yadira Rivera-Sanchez
- Best Pediatric Specialists in Dallas, *D Magazine*
- Provider of the Month, Children’s Health

Peter Schochet
- Best Pediatric Specialists in Dallas, *D Magazine*

Preeti Sharma
- Provider of the Month, Children’s Health

Invited Lectures

Yadira Rivera-Sanchez
- World Asthma Day, Children’s Health, Dallas, TX
  - “Asthma Epidemiology and Current Therapies”
- 18th Annual Respiratory Care Conference, Children’s Health, Dallas, TX
  - “Asthma...No Cure, What Do We Do in the Meantime?”
- Aerodigestive Disease Conference, Children’s Health, Dallas, TX
  - “The Pulmonary Perspective on Aerodigestive Disorders”

Platform & Poster Presentations

Michelle Carabello
  - “Subpleural Fat Masquerading as Bilateral Pleural Effusions in a Child with Trisomy 21, Obesity, and Asthma”
  - Carabello M, Houser GH
Preeti Sharma

- Poster Presentations: 29th Annual North American Cystic Fibrosis Conference, Phoenix, AZ, October 2015
  - “The Dallas Dashboard: Improving Pediatric to Adult Transition”
    Sharma P, Becker J, Sathe M, Jain R
  - “The Use of TPN in Pediatric CF Patients to Improve BMI”
    Ghazala Z, Sathe M, Sharma P, Shaw K
  - Improving Adherence to Oral Glucose Tolerance Testing in CF Patients”
    Ghazala Z, Sathe M, Sharma P, Moore R

Other Presentations

Michelle Caraballo

- Expert testimony, February 2015, at the Colorado Department of Human Services (CDHS) during deliberations for stricter regulations for infant sleep environments in licensed daycare centers, to align with the 2011 AAP recommendations. With the help of this expert testimony, the provisions passed and went into effect on April 1, 2015.
- Interview for Stapleton Front Porch, a local newspaper distributed to neighborhoods around Children’s Hospital Colorado. “More Than Half of U.S. Infants Sleep with Potentially Unsafe Bedding.” January 2015

Devika Rao

- Tamal Krishna Goswami Academy, Dallas, TX
  - What Is It Like To Be a Doctor?”

National Service

Kamal Naqvi

- Member, Committee on Sleep Related Breathing Disorders
- Member, Accreditation Committee, American Academy of Sleep Medicine

Education and Training

The Division of Pediatric Respiratory Medicine provides educational opportunities for medical students and pediatric residents in addition to our accredited fellowship program.

Medical Students

A full curriculum based on the core competencies as published by the Council on Medical Student Education in Pediatrics (COMSEP) is taught through bedside clinical supervision and daily rounds, in addition to various didactic sessions and interactive case-based discussions facilitated by faculty in nearly all the divisions in the Department of Pediatrics. The entire curriculum is reviewed on an ongoing basis through feedback from UT Southwestern Medical School faculty, national regulatory agencies, and students themselves. Students rotating through the core clerkship continue to outpace national averages on standardized assessments.

Medical students participate in outpatient specialty clinics staffed by members of the Division of Pediatric Respiratory Medicine faculty. During clinic sessions, medical students receive individualized, one-on-one teaching by the faculty.
Residents

The evaluation of children with respiratory problems is an integral component of the practice of pediatric medicine. Respiratory symptoms and problems are the most common reason for childhood physician encounters and are the number one cause of school absenteeism and hospital admission. Hence, it is essential that the pediatric resident become familiar with recognition, diagnosis, and care of respiratory diseases. The overall goal of the Pediatric Respiratory Medicine rotation is to provide residents with intensive exposure to a broad spectrum of pulmonary disorders, in order to highlight principles of management, current controversies, and the respective roles played by the pediatrician and pulmonary subspecialist, as well as other disciplines in the management of these patients.

The Pediatric Pulmonary rotation has been designed for upper-level residents which include second- and third-year general pediatric residents. Goals are aimed at gaining experience in the daily management of children with known as well as presumptive pulmonary disorders. Expectations include demonstration of medical knowledge, comprehension of pathophysiology, development of differential diagnosis, and developing increased independence in the formulation of management plans. In addition, residents should maintain an overall awareness of the acuity of the patients of the inpatient service.

Yadira Rivera-Sanchez, M.D., directs the Pediatric Respiratory Medicine Resident Education Program.

Fellows

The mission of our newly accredited Pulmonology Fellowship Training Program is to prepare postgraduate pediatricians to be experts in pulmonary medicine. Training is through a combination of educational activities, competencies, and assessment methods, including patient care, guided reading, and discussion with regards to organization, business planning, and management of the pediatric pulmonary service, and research methodology.

Under the direction of Tanya Martinez Fernandez, M.D., and overseen by the ACGME, our three-year Fellowship Program began enrolling two trainees each year in July 2011. The majority of fellowship education is through didactic conference and active participation in the inpatient, outpatient, and consulting services.

Research Activities

Research efforts in the Division of Pediatric Respiratory Medicine have remained relatively small, primarily because the first priority of the Division has been the establishment of an excellent clinical program. Nonetheless, each faculty member is developing areas of interest for scholarship.

- Researchers in Dr. Julio Pérez Fontán’s lab investigate how the nervous system influences the structure and function of the airways. Physiological and neuroanatomical studies have contributed to the present view of the bronchomotor system as an integral part of breathing control, through the relationships between vagal and phrenic outflows and the overlap between the bronchomotor and breathing networks. Recent attention has been focused on the participation of sensory neuropeptides in the regulation of the inflammatory response.

- Dr. Peter Luckett’s research interests center on acute lung injury, mechanical ventilation, near-fatal asthma, pulmonary outcomes in neuromuscular disease, and clinical trials in pediatric critical care. Recent work includes development of a clinical trial of strict glucose control in critically ill children, using a computer-driven protocol.

- The respiratory consequences of early-onset scoliosis are the focus of Dr. Peter Schochet’s research.

- Dr. Preeti Sharma’s research interests involve the optimization of the clinical care of cystic fibrosis patients, and observational studies and treatment in children with cystic fibrosis.
Clinical Activities

The Pediatric Respiratory Medicine Division offers both inpatient and outpatient consultation for a wide variety of chest disorders in children.

Inpatient Services

The inpatient population consists primarily of patients with chronic respiratory failure on mechanical ventilation and patients with neuromuscular diseases hospitalized for an acute respiratory process, acute asthma exacerbations and status asthmaticus, complicated pneumonias, and patient’s status post airway surgery.

Yadira Rivera-Sanchez, M.D., oversees the inpatient activities of the Division. There is an attending pulmonologist assigned to the Pediatric Respiratory Medicine Service at all times.

Outpatient Services

Outpatient activities are comprehensive and primarily centered on a busy general pulmonology practice. Physicians combine their efforts with a group of talented and dedicated nurse practitioners, who conduct clinical consultations on selected patients.

- Tanya Martinez Fernandez, M.D., is Director of the Pulmonary Function Lab, has led the development and organization of the outpatient clinics, and oversees the Comprehensive Asthma Program at Children’s.
- Kamal Naqvi, M.D., directs the sleep program, which provides clinical services on a variety of sleep and respiratory control related disorders.
- Peter Schochet, M.D., conducts specialized clinics on neuromuscular and chest wall related respiratory diseases, and on the respiratory complications of sickle cell disease.
- In 2015 Devika Rao founded a Pulmonary-Sickle Cell interdisciplinary clinic to address pulmonary needs of children with sickle cell anemia. This clinic takes place at the Pauline Allen Gill Center for Cancer and Blood Disorders once each month.

Patient Care Guidelines

Division members have been actively engaged in the establishment of patient care guidelines, including for the evaluation and implementation of non-invasive ventilation in infants at home, for the care of asthma patients, and for tracheostomy care.
Patient Statistics

**Pulmonary at Children’s Medical Center Dallas**

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<td>Inpatient admissions</td>
<td>409</td>
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<td>Inpatient consultations</td>
<td>430</td>
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<td>New outpatient visits</td>
<td>2,764</td>
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<td>Outpatient follow up</td>
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**Pulmonary at Children’s Plano**

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<tr>
<td>New outpatient visits</td>
<td>500</td>
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<td>Outpatient follow up</td>
<td>610</td>
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**Pulmonary at Children’s Southlake**

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<td>New outpatient visits</td>
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<td>Outpatient follow up</td>
<td>132</td>
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**Procedures**

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<td>Sleep studies – Plano</td>
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<td>Pulmonary function testing</td>
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<td>Laboratory procedures</td>
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<td>Bronchoscopies</td>
<td>920</td>
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Current Grant Support

**Preeti Sharma**

**Grantor:** Cystic Fibrosis Foundation  
**Title of Project:** Cystic Fibrosis Foundation: CF Teaching and Care Center Patient Registry, Screening Improvement Program Initiative, Mental Health Coordinator Support, and Multiple Observational Studies and Intervention/Therapy Trials in CF Patients.  
**Role:** Principle Investigator  
**Dates:** 01/2015 – 12/2018

Peer-Reviewed Publications

