**Division Introduction**

UT Southwestern Medical Center is widely recognized as one of the nation’s leading centers for neonatal–perinatal care, teaching, and research. The Division is dedicated to providing exceptional care for the most critically ill patients and is committed to the training of outstanding physicians and scientists. Through the continued discovery of new knowledge, division faculty and staff strive to help tomorrow’s patients as well as improve outcomes for the vulnerable population for whom we care.

Directed by Rashmin Savani, M.B.Ch.B., the Division of Neonatal-Perinatal Medicine is comprised of a large group of nationally recognized faculty members with expertise in virtually all aspects of modern neonatal-perinatal care and state-of-the-art research.

The Division’s mission is to positively impact the health of neonates in our community, our nation, and worldwide through excellence in patient care, research, and education. That mission is three-fold:

**Excellence in Neonatal Care**

Through multidisciplinary and family-centered care, we will strive to improve the standard of practice and ensure the highest quality of care to neonates in our hospitals and around the world. We will care for neonates with the highest respect for their precious lives in a compassionate and caring environment and will utilize evidence-based approaches to clinical care that are regularly evaluated and updated.

**Leadership in Research**

We will pursue new knowledge through high-quality research that explores unanswered questions, as well as tests and refines previously established ideas in neonatal-perinatal care. As global leaders in research, we will work collaboratively inside and outside our institution in order to generate important discoveries that will lead to improvements in the care that is provided for neonates worldwide.

**Education of Future Leaders**

We will impart knowledge, instill excitement for learning, and translate these into focused areas of research for our neonatal medicine trainees, pediatric residents, and medical students. We will train future leaders in neonatal medicine who will in turn impart the knowledge and values obtained during their training to those with whom they interact during their careers.

In 2017, all NICUs covered by the Division of Neonatal-Perinatal Medicine were surveyed by The American Academy of Pediatrics and were commended for the quality of care provided at each site.
Faculty

The Division of Neonatal-Perinatal Medicine consists of neonatologists and pediatricians who are committed to providing the highest level of clinical care to the infants they treat, to conducting cutting-edge research, and to the education of postdoctoral trainees. Division faculty’s research interests span a wide range of topics, including pulmonary vascular biology, neonatal resuscitation, and long-term follow-up care.

In 2017 the Division welcomed five new faculty members.

Christina Chan, M.D.
Assistant Professor

B.S.
Stanford University, Stanford, CA, 2001

M.D.
University of California, San Diego, 2007

Postdoctoral Training
Residency, Pediatrics
University of California, San Diego, 2007-2010
Fellowship, Neonatology
University of California, San Diego, 2010-2013

Interests
Resuscitation and medical technology and informatics to improve patient care

Christine Cortelyou, M.D.
Instructor

B.S., B.A., magna cum laude
Rockhurst University, Kansas City, MO, 2008

M.D.
University of Texas School of Medicine, San Antonio, TX, 2014

M.P.H.
University of Texas School of Public Health, Houston, TX, 2014

Postdoctoral Training
Residency, Pediatrics
UT Southwestern/Children’s Health, Dallas, TX, 2014-2017

Interests
Quality Improvement

Andrea Foldes, M.D.
Instructor

B.A.
University of Texas at Austin, Austin, TX, 2008

M.D.
University of Texas Health Science Center, San Antonio, TX, 2014

Postdoctoral Training
Residency, Pediatrics
UT Southwestern/Children’s Health, Dallas, TX, 2014-2017

Interests
Neonatal-Perinatal Medicine, blood-brain barrier, inflammation, angiogenesis, and BPD
Athra Kaviani, M.D.  
Assistant Professor  

**B.S., magna cum laude**  
University of Texas at Austin, Austin, TX, 2009  

**M.D.**  
UT Southwestern Medical Center, Dallas, TX, 2013  

**Postdoctoral Training**  
Residency, Pediatrics  
UT Southwestern/Children’s Health, Dallas, TX, 2013-2016  
Chief Residency, Pediatrics  
UT Southwestern/Children’s Health, Dallas, TX, 2016-2017  

**Interests**  
Public health outcomes and medical education  

Katherine Stumpf, M.D.  
Assistant Professor  

**B.A., magna cum laude**  
Washington University in St. Louis, St. Louis, MO, 2003  

**M.D.**  
Washington University in St. Louis, St. Louis, MO, 2007  

**Postdoctoral Training**  
Residency, Pediatrics  
University of California San Diego/Rady Children’s Hospital, San Diego, CA, 2007-2010  
Fellowship, Neonatal-Perinatal Medicine  
UT Southwestern/Children’s Health, Dallas, TX, 2010-2013  

**Interests**  
Neonatal nutrition and urinary tract infections in preterm infants  

**Honors / Awards**  

Noorjahan Ali  
- Awarded Outstanding Poster, Children’s Hospital Neonatal Consortium National Annual Meeting  

Luc Brion  
- Member, National Steering Committee of the Subspecialty Investigators Network  

Natalie Frost  
- Selected member of the Women in Neonatology Task Force, Section of Neonatal-Perinatal Medicine, AAP  

Mambarambath Jaleel  
- Member, National Quality Forum Steering Committee and Perinatal & Reproductive Health Standing Committees  
- Appointed Associate Division Chief (Clinical Affairs)  

Vishal Kapadia  
- Best Quality Improvement Project, EBM Research Fair at Children’s Health  

Athra Kaviani  
- Editorial Board Member, AAP Pediatric Care Online
Imran Mir

- Appreciation from Nursing Leadership, Team Leader Nursing at Children’s NICU
- Standing up for Safe Sleep for NICU Patients, Team Leader Child Life Support at Children’s NICU

Julie Mirpuri

- Invited presenter at an NIH Emerging Themes Workshop on the Microbiota, NIH, Bethesda, MD
- Elected to membership of The Society for Pediatric Research

Charles Rosenfeld

- Trainee Travel Award, Southern Society for Pediatric Research
- College of Reviewers, Canadian Institutes of Health Research (CIHR Study Section)

Rashmin Savani

- Texas Super Doctor, Texas Monthly Magazine
- Albert Nelson Marquis Lifetime Achievement Award, Who’s Who Publication Board

Jack Seidel

- Best Pediatric Specialist, D Magazine
- Texas Super Doctor, Texas Monthly Magazine

Audra Stewart

- Promotion to Associate Professor

Invited Lectures

Lina Chalak

- Chair, Speaker, Scientific Symposium - PAS - San Francisco, CA, May 2017
  - “The Conundrum of Mild Neonatal Encephalopathy: Reviewing the Evidence”
- Invited Speaker - Neuro NICU Advanced Conference - Stanford University, Palo Alto, CA, May 2017
  - “Advanced Application of NIRS in Asphyxia”
- Invited Speaker – Saban Research Institute and Children’s Hospital Los Angeles, Los Angeles, CA, June 2017
  - “Autoregulation Advanced Wavelet Methodologies and Clinical Applications”
  - “Management of Mild NE”
- International Perinatal Collegium Meeting, Edinburgh, Scotland, July 2017
  - “Prospective Study of Infants with Mild Encephalopathy: The PRIME Study”
- 10th International Conference on Brain Monitoring and Neuroprotection in the Newborn, Killarney, Ireland, October 2017
  - “Long-term Outcomes of the Prime Collaborative Cohort: Is it Really Mild?”
- 1ST Gulf International Quality Conference and Neuro NICU Workshop, Muscat, Oman, November-December, 2017
  - “NIRS Application, Amplitude-integrated EEG Interpretation: What Do the Wiggles Mean?”
  - “Neuroprection and HIE”

Becky Ennis

- Baylor Medical Center Emergency Department Staff, Dallas, TX, May 2017
  - “NRP Update”
- Mother Francis Hospital NICU Staff, Tyler, TX, June 2017
  - “Very Low Birth Weight Education and Simulation (Preterm infant with pulmonary hemorrhage)”
Roy Heyne

- University of Dallas, Dallas, TX, April 2017
  - “Ethical Ramifications of Human Embryology and Fetal Development”

Vishal Kapadia

- 2nd Congress of Joint European Neonatal Societies, Venice, Italy, September 2017
  - “BradyPrem Study: Is Heart Rate the Most Vital of All Vital Signs During Preterm Resuscitation?”

Charles Rosenfeld

- International Perinatal Collegium Meeting, Edinburgh, Scotland, July 2017
  - “Biomarkers of Adiposity Are Elevated in Preterm Very-low-birth-weight Infants at 1, 2 and 3 Years of Age”

Laura Rubinos

- International Neonatology Meeting, Puebla, Mexico, September 2017
  - “Management of the Difficult Airway”
  - “Strategies to Improve Neurodevelopmental Outcomes of Premature Neonates”

Rashmin Savani

- 6th Federation of European Biochemical Societies Advanced Lecture Course, Spetses, Greece, May 2017
  - “Regulation of Inflammation by the Hyaluronan Receptor RHAMM: Studies in Knockout and Transgenic Mice”
- German Society for Neonatology & Critical Care Medicine, Dresden, Germany, June 2017
  - “Inflammasome/Caspase-1 Pathways as Therapeutic Targets for Preventing BPD”
- 11th International Conference on Hyaluronan, Cleveland, OH, June 2017
  - Session Chair, “HA in Immunity and Inflammation”
- International Perinatal Collegium Meeting, Edinburgh, Scotland, July 2017
  - “Regulation of Inflammation by the Hyaluronan Receptor RHAMM: Studies in Knockout and Transgenic Mice”
- 7 Lakes Proteoglycans Conference, Varese, Italy, September 2017
  - “Receptor for Hyaluronan Mediated Motility (RHAMM) is Indispensable for VEGF-stimulated Src and eNOS Activation and Angiogenesis”
- Visiting Professor, The University of Siena, Siena, Italy, September 2017
  - “BPD in the 21st Century”
- The No Name Conference on Perinatal Vascular Biology, Tampa, FL, October 2017
  - “The Receptor for Hyaluronan Mediated Motility (RHAMM) is Indispensable for VEGF-stimulated Src and eNOS Activation and Angiogenesis”

Joseph Schneider

- Association of Medical Directors of Information Systems, Ojai, CA, June 2017
  - “Nothing About Me Without Me: A CHIO’s Journey Through Medical Identity Mix-up”
  - “Financial Reporting: Why CMIOs Need to Understand this Stuff”

Julide Sisman

- International Conference on Clinical Pediatrics, London, UK, June 2017
  - “New Perspectives in Lenticulostriate Vasculopathy in Neonates”
Elizabeth Stehel

- National Institute for Children’s Health Quality, throughout Texas, August 2017
  - “Texas Hospital Leadership Meeting on Breastfeeding Outcomes”

Myra Wyckoff

- 2017 Neonatal Nutrition Conference, Albany Medical College, Tarrytown, NY
  - “The Science Behind Neonatal Delivery Room CPR”
  - “Delivery Room Stabilization of the ELBW Infant: The Golden Minute”
- 11th International Spark of Life Conference, Adelaide, Australia, May 2017
  - “ILCOR Consensus on the Science of Resuscitation with Treatment Recommendations – What Are We Looking at Next?”
- 25th Annual International Middlesbrough Neonatal Conference, Middlesbrough, UK, June 2017
  - “Resuscitation of ELBW Infants: State of the Art or State of Confusion?”
  - “Oxygen Use During Neonatal Delivery Room Stabilization”
  - “Neonatal CPR: What’s the Science and Should We Even Do It?”
- 3rd Biennial United South African Neonatal Association Conference, Johannesburg, South Africa, September 2017
  - “Cutting Edge Delivery Room Practice in 2017”
  - “Advances in Thermoregulation”

Conference Presentations

Pediatric Academic Societies Meeting, San Francisco, CA, May 2017

Adams-Chapman I, Heyne R, Peralta-Carcelen M, Purdy I, McDonald S, Duncan A

- Poster, “Changing Prevalence and Severity of Cerebral Palsy Among Extremely Preterm Neonates in NICHD NRN Over Ten Years”

Blanco V, Rosenfeld CR, Brown LS

- Poster, “Blood Pressure Measurements in Preterm Infants in the NICU: Reliability and Effects of Feeding and State”


- Poster, “Decreasing Nasal Breakdown in Infants Receiving Nasal Continuous Positive Airway Pressure (nCPAP)”

Chalak L, Inder T

- Platform Presentation Co-chairs, “The Conundrum of Mild Neonatal Encephalopathy (NE): Should They Be Cooled?”

Chalak L, Tian F, Zhang R


Deramo J, Jaleel MA, Frost M.

- Poster, “Kangaroo Care in the Parkland NNICU: Improving Patient Participation”

Heyne R, Heyne T

- Poster, “Rediscovering the Discoverer of Trisomy-21: Jerome Lejeune, Father of Modern Genetics”
Heyne R, Heyne T, Lin AE

- Poster, “The Earliest Known Examples of PIK3CA-ROS? Two Adolescents with Limb Anomalies in 17th and 18th Century Woodcuts”

Hokanson J, Frost M

- Poster, “The Impact of Moving from an Open Bed NICU to a Single Bed Layout on Parent-Provider Communication”

Ibrahim J, Mir I

- Poster, “Maggots: History from Just Being Insects to FDA Approved Medical Devices”

Kakkilaya V, Marshall M, Jubran I, Mashruwala V, Kapadia V, Ramon E, Simcik V

- Poster, “Quality Improvement (QI) Resuscitation Bundle to Decrease Delivery Room (DR) Intubation in Premature Newborns”

Kumar D, Thomas S, Raetz M, Hooper LV, Savani R, Mirpuri J

- Poster, “Empiric Antibiotic Exposure in Neonatal Mice Results in Translocation of Proteobacteria across the Intestinal Barrier, Increased Expression of Antimicrobial Proteins, and an Increase in Paneth Cells in the Lamina Propria”


- Poster, “The Impact of Pulmonary Hypertension in Preterm Infants with Severe BPD: A Multi-center Comparison of NICU and Readmission Outcomes”

Naeun Cheong, Jie Liao, Christopher Longoria, Qian Wu, Ivan Yuhanna, Philip Shaul, Rashmin C. Savani

- Poster, “Low Molecular Weight Hyaluronan (LMW HA) Uses the HA receptor RHAMM to Phosphorylate and Activate Akt and eNOS to Stimulate Endothelial Cell Migration”

Ortigoza E, Cagle J, Chien JH, Neu J, Oh S, Brown LS

- Poster, “Electrogastrography, Near-infrared Spectroscopy, and Acoustics to Measure Gastrointestinal Development in Preterm Babies”

Pavageau L, Jaleel M, Brion L, Rosenfeld C, Brown L


Scheid L, Brown LS, Clark C, Rosenfeld CR

- Oral, “Are Data Extracted from Electronic Medical Records Valid for Research Purposes?”

Shafer G, Scheid L, Rosenfeld CR, Brown LS

- Oral, “Serial Neutrophil Values Do Not Aid in the Evaluation for Late-onset (LOS) Sepsis in the Intensive Care Unit (NICU)”

- Poster, “Developmental Outcome of Preterm Infants with Lenticulostriate Vasculopathy on Cranial Ultrasound”

Thomas S, Raetz M, Savani RS, Mirpuri J

- Oral, “Maternal High Fat Diet Results in Microbiota-Dependent Expansion of Type 3 Innate Lymphoid Cells (ILC3s) and Susceptibility to Inflammation in Neonatal Mice”

Vohr B, Heyne R, Bann C, Das A, Higgins R, Hintz S

- Oral, “Extreme Preterm Risk of Overweight and Obesity at Early School Age”

Vohr B, Heyne R, Bann C, Das A, Higgins R, Hintz S

- Poster, “Extreme Preterm Risk of Prehypertension and Hypertension at Early School Age”

Other Conferences

Ali N.

Poster, Children’s Hospital Neonatal Consortium, Columbus, OH, October 2017
“Resuscitation of Neonates Beyond the Delivery Room”


Poster, 11th International Conference on Hyaluronan, Cleveland, OH, June 2017
“LMW Hyaluronan Uses RHAMM to Phosphorylate and Activate AKT and eNOS to Stimulate Endothelial Cell Migration”

Foldes AE.

Poster, Southern Regional Meeting, Society for General Internal Medicine, New Orleans, LA, February 2017
“Four Month-old Infant with Terminal Ileum Duplication Cyst”

Liao J, Lal CV, Cheong N, Longoria C, Pure E, Savani RC.

Poster, 11th International Conference on Hyaluronan, Cleveland, OH, June 2017
“Endothelial CD44 Mediates Neonatal Hyperoxia-induced Lung Injury”

Mir I, Chalak L, Rosenfeld CR.

Poster, Society for Reproductive Investigation 64th Annual Meeting, Orlando, FL, March 2017
“Placental Clearance Modulates Circulating Levels of Fetal Pro-inflammatory but Not Anti-Inflammatory Cytokines During Term Parturition and May Contribute to Histological Chorioamnionitis”

Monaco-Brown M, Pike K, Frost M, Dickenson B, Calaman S.

Workshop, Association of Pediatric Program Directors Annual Spring Meeting, Anaheim, CA, April 2017
“Helping the Eaglet to Soar: How to Prepare Your Trainees for Life After Residency”


Oral, AAP Western Conference on Perinatal Research, Indian Wells, CA, January 2017
“Validation of Serial Length Measurements in Preterm Infants in the Neonatal Intensive Care Unit (NICU)”
Education and Training

The Neonatal–Perinatal Medicine Division provides educational opportunities for medical students and pediatric residents in addition to our fully accredited fellowship program. Our goal is to impart knowledge, instill excitement for learning, and translate questions into focused areas of research.

Third-Year Medical Students

During their pediatrics rotation at UT Southwestern, third-year medical students spend time in the Newborn Nursery at Parkland Hospital.

Fourth-Year Medical Students

Students in their fourth year at UT Southwestern may elect to spend time in the Newborn Nursery or the Neonatal Intensive Care Units at Parkland Hospital and Children’s Medical Center.

Residents

The design of the Pediatric Residency Program at UT Southwestern and Children’s Medical Center allows for exposure to Neonatal-Perinatal Medicine services at Parkland Hospital and elective exposure at Children’s throughout the three-year training program.

Elective Rotations for Pediatric Residents from External Programs

The Division offers the following elective rotations to residents from other programs:

- Children’s Neonatal Intensive Care Unit
- Parkland Neonatal Intensive Care Unit
- Parkland Newborn Nursery
- Children’s Low Birth Weight Clinic
- Research

Fellows

Vision - We envision that our graduates will positively impact the health of neonates through their leadership, research, and excellence in patient care.
Mission - We have three missions:

- **Patient Care:** We will strive to improve the standard of practice and ensure the highest quality of care to neonates in our hospitals and around the world. We will care for neonates with the highest respect for their precious lives in a family-centered, compassionate, and caring environment, and utilizing evidence-based approaches to treatments that are regularly evaluated and updated.

- **Research:** We will pursue new knowledge through high-quality research that explores unanswered questions and tests and refines previously established ideas in developmental biology and neonatal-perinatal care. We will engage in world class clinical, translational, and basic science research, aimed at improving babies’ lives throughout their lifespan. We will work collaboratively within and outside our institution in order to generate important discoveries that will enhance medical practice and inform the medical community and the public of evidence-based approaches to neonatal-perinatal medicine.

- **Education:** We will impart knowledge, instill excitement for learning, and translate and refine questions into focused areas of research for our trainees. We will train future leaders in neonatal medicine, who will work in an academic or private setting and deliver the highest quality care to their patients. We will accomplish this by:
  - Allowing fellows to pursue their interests in a structured manner in order to produce quality research, addressing significant questions in neonatal-perinatal medicine.
  - Promoting a collegial environment that provides ample opportunity for fellows to grow and learn from their own and others’ experiences.

Research Activities

The following are representative of various research activities occurring in the Division of Neonatal-Perinatal Medicine at UT Southwestern.

Clinical Research

- **NIH Neonatal Network for Clinical Trials:** The Division of Neonatal-Perinatal Medicine is an active participant in the Neonatal Network clinical studies.
- **Treatment of chorioamnionitis-exposed neonates:** Several alternative diagnostic tests and therapies have been promoted for the neonate whose mother is diagnosed with chorioamnionitis.
- **Follow-up care** for very low birth weight and high-risk infants, including neurodevelopment, chronic disease, and nutrition is part of our ongoing study of these babies.
- **Neonatal resuscitation:** Randomized trials (e.g., temperature control, oxygen delivery, resuscitation educational interventions), observational studies (ETCO2 guidance of CPR, effectiveness of epinephrine dosing), as well as other observational studies using the resuscitation database, which includes detailed information about all resuscitation team calls since 2003.
- **Hypoxic-ischemic encephalopathy:** Mechanism of injury; assessment of new recognition tools such as the amplitude EEG; translational research utilizing a piglet model of asphyxia; optimizing neuro-protection offered by hypothermia; rewarming after hypothermia; cerebrovascular hemodynamic modulation of asphyxiated infants; neuroimaging; neurodevelopment.
- **Studies in the newborn nursery:** Late preterm infants, hypoglycemia, transcutaneous bilirubin, pulse oximetry screening for congenital heart disease.
- **Observational studies using available databases:** Several research studies and quality improvement projects use information from available databases, including: the neonatal resuscitation database (Parkland, see above), the neonatal intensive care unit (NICU) databases at Parkland or Children’s Medical Center (CMC), the NICHD Neonatal Research Network Databases (Generic Database, Follow-up Database, and Moderate Preterm Registry), the Vermont-Oxford Network (Parkland NICU) and the Child Health Neonatal Consortium Database (CMC NICU).
• **Early evidence suggesting potential risk of metabolic syndrome in infancy among very low birth weight infants:** Evidence for abnormal weight-to-length ratio, increased adiposity, glomerular hyperfiltration and high blood pressure in very low birth weight infants followed at the low birth weight clinic.

• **Nutritional and growth studies:** Optimizing Individual Nutrition in Preterm Very Low Birth Weight Infants: Randomized Clinical Trial comparing individualized versus optimized supplementation of human milk; Quality improvement in nutrient administration and linear growth assessment.

• **Weaning CPAP in preterm infants:** randomized study comparing two modes of weaning CPAP: from 5 cm vs. decreasing from 5 to 4 and 3 cm.

### Laboratory Research

- Maternal and fetal cardiovascular physiology and development
- Animal models relating to neonatal resuscitation and gestational hypertension
- Pathogenesis of bronchopulmonary dysplasia/chronic lung disease, and novel therapies
- Molecular basis of vascular disease
- Pulmonary endothelial function, nitric oxide, persistent pulmonary hypertension, and calcium metabolism
- Hyaluronan (Hyaluronic acid) and its role in inflammation and endothelial function
- Probiotics/Commensal organisms and their effects on immune mediators in the developing gut

### Clinical Activities

The Division of Neonatal–Perinatal Medicine has provided care for normal newborns and newborns with complex medical and surgical problems for more than 35 years. Faculty offer clinical services at four distinct institutions with a total of 18,000-20,000 births and 250 NICU beds.

#### Parkland Health and Hospital System

- **Neonatal Intensive Care Unit:** Since 1974, the Neonatal Intensive Care Unit (NICU) at Parkland Memorial Hospital has been providing exceptional and comprehensive care to critically ill newborns. This was the first NICU in Dallas County and is the largest Level III unit in the region. Our 98-bed unit averages ~1,400 admissions annually, almost 100 admissions a month. Our staff consists of a collaborative team of physicians, nurses and support staff who are all highly experienced in caring for a wide array of neonatal disorders both medical and surgical. Working closely with our highly skilled colleagues in the maternal-fetal medicine department, we are able to provide exceptional care both before and after birth. This teamwork has resulted in one of the lowest mortality rates in the country.

- **Newborn Nursery:** With more than 12,000 deliveries a year, the newborn nursery at Parkland Hospital is one of the busiest in the country. Under the supervision of pediatric faculty from the Neonatal-Perinatal Division, pediatric residents and pediatric nurse practitioners provide comprehensive care for both term and near-term infants from birth through discharge. Learn more about the Newborn Nursery at Parkland. Parkland’s newborn service is a dedicated site for the CDC Initiative on “Best Fed Beginnings,” a program to encourage exclusive breastfeeding with a goal to obtain “Baby Friendly” designation for the hospital.

- **Labor and Delivery:** We provide a unique and highly trained neonatal resuscitation team that attends more than 300 high-risk deliveries a month and have the capability to deliver cutting-edge delivery room care in even the most complex cases, including EXIT (Ex Utero Intrapartum Treatment) procedures. Under the direction of Myra Wyckoff, M.D., an internationally acclaimed physician in neonatal resuscitation research, the labor and delivery faculty provide a very unique resuscitation rotation for fellows, residents, and medical students, which includes...
exposure to a computerized patient simulator, participation in resuscitation research, review of the literature, and attendance at high risk deliveries.

Children’s Health System of Texas

- **Level IV Neonatal Intensive Care Unit**: The NICU at Children’s combines advanced technology with highly trained healthcare professionals to provide comprehensive care for critically ill newborns. This state of the art, 47-bed NICU opened in 2009 as the premiere referral unit in North Texas. The NICU staff, under the supervision of faculty members from the Division of Neonatal–Perinatal, is experienced in caring for a wide-array of neonatal disorders, both medical and surgical. Through an integrated collaboration between Children’s and an extensive network of pediatric subspecialists from UT Southwestern, this NICU is able to provide exceptional care tailored to the specific needs of each individual patient.

- **THRIVE at Children’s**: The Low Birth Weight (THRIVE) Clinic provides comprehensive medical and psychosocial treatment through intensive intervention, education, social services, and developmental testing for high-risk infants from birth to age five.

- **The Fetal Evaluation and Treatment Alliance (FETAL) and The Fetal Center**: Established in 2008, this program has grown substantially and culminated in the opening of a dedicated Fetal Center in 2014. FETAL is the only program in North Texas offering a full continuum of specialized care for pregnant women diagnosed with a fetal anomaly. Patient families and their referring providers receive prenatal conferences with a highly specialized multidisciplinary team, all in one location, that brings the expertise of UTSW subspecialists to the affected baby at risk. A personalized approach addresses each in utero diagnosis to determine the best strategy for pregnancy, delivery and continuity of care after birth. Receiving care through the FETAL Center provides access to maternal fetal medicine specialists, a world-renowned neonatal resuscitation team as well as a complete range of pediatric and surgical subspecialists who work together to deliver the highest level of comprehensive care.

- **TeleNICU**: In 2013, in collaboration with Children’s Health, we launched TeleNICU, the state’s first dedicated neonatal telemedicine service and one of the most sophisticated systems of its kind in the US. TeleNICU links specially trained, board-certified UT Southwestern neonatologists at Children’s Health to physicians at other hospitals’ NICUs to consult and assist in the management of the sickest and most fragile infants. Using specialized equipment and secure broadband transmission, our dedicated neonatologists are able to communicate with doctors at other facilities, 24/7. Using two-way, real-time interactive communication, virtual examination of newborns at distant-site NICUs is achieved. Participating hospitals that have Level III NICU nurseries connect with UTSW neonatologists using a mobile equipment cart with medical-quality videoconferencing capabilities, secure data transfer, and digital equipment that permits diagnostic testing. Our physicians are able to use specialized cameras to perform high-definition visual examinations and a high-tech stethoscope to listen to the baby’s heart and lungs. Information Week named TeleNICU as one of the Elite 100 Information Technology Innovations in 2015.

William P. Clements Jr. University Hospital

- **Level III NICU**: The William P. Clements Jr. University Hospital features 30 NICU rooms, giving each baby his or her own room, in a space sized to easily accommodate both hospital staff and parents. State of the art neonatal care including mechanical ventilation both conventional and high frequency, inhaled nitric oxide therapy and outstanding nursing care are provided to fragile infants. Parents can sleep in the room overnight with their newborns – enabling parents to focus on their infant and build bonds that will help the baby grow stronger. Research shows that more parental involvement helps babies with weight gain, breastfeeding, and earlier release from the hospital.

- **Newborn Nursery**: The Labor, Delivery and Recovery rooms combine modern technology with a warm, homelike environment to provide a safe and comfortable experience for mothers and families. Our highly experienced newborn physicians provide state-of-the-art care for the newborn infant. We also have lactation consultants to
provide breastfeeding assistance. UT Southwestern is a member of the Texas Ten Step Program to improve
maternity care practices. Policy development, education of staff, and provision of discharge resources for
breastfeeding mothers are key initiatives of the program.

Southwestern Health Resources – Texas Health Presbyterian Hospital Dallas (THD)

The UT Southwestern Division of Neonatal-Perinatal Medicine assumed care of the newborn infants in the NICU and Special Care Nursery at THD in September 2015, marking the beginning of Southwestern Health Resources, a close affiliation between UT Southwestern and Texas Health Resources.

- **Level III NICU**: Located on the third floor of the Margo Perot Center at Texas Health Dallas, a 47-bed Level III NICU provides 24-hour comprehensive care to premature, high-risk and ill infants. The self-contained program offers therapies, equipment and an experienced multidisciplinary specialist team that includes UTSW neonatologists, medical subspecialists and surgeons as well as excellent neonatal nurses, respiratory therapists, pharmacists and occupational therapists.

- **Special Care Nursery**: The Special Care Nursery provides specialized services and medical monitoring for infants who have graduated from the NICU but still require additional care. The nursery is staffed by board-certified UT Southwestern neonatologists who provide around-the-clock expert care for premature and special-needs infants. This 44-bed nursery is the only Level II nursery in the Dallas area that offers private rooms. Parents are able to room with their infants in hotel-like surroundings that include a refrigerator, granite countertops, a flat-screen TV and a private bath, thereby encouraging parents to spend as much time with their babies as possible.

- **THRIVE at THD**: As an extension of the THRIVE program at Children’s, THRIVE at THD skilled developmental specialists and pediatricians provide comprehensive developmental testing for high-risk infants that have graduated from THD and surrounding NICUs.

- **FETAL at THD**: The Fetal Evaluation and Treatment Alliance (FETAL) now provides fetal consultations at the Children’s Health Specialty Center Park Cities located in the Margot Perot Center for Women & Infants at THD. Staffed by UT Southwestern neonatologists, pediatric subspecialists and surgical specialists, this program extends the continuum of specialized care for pregnant women diagnosed with a fetal anomaly.

### Patient Statistics

<table>
<thead>
<tr>
<th>Parkland Health &amp; Hospital System</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Parkland Health &amp; Hospital System</strong></td>
<td>Births</td>
<td>10,686</td>
<td>12,441</td>
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<tr>
<td></td>
<td>NICU Admissions</td>
<td>1,316</td>
<td>1639</td>
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<td></td>
<td>Average Length of Stay</td>
<td>18.4</td>
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<tr>
<td><strong>Children’s Medical Center</strong></td>
<td>Admissions</td>
<td>622</td>
<td>642</td>
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<tr>
<td></td>
<td>Average Length of Stay</td>
<td>17.9</td>
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<tr>
<td><strong>William P. Clements Jr. University Hospital</strong></td>
<td>Births</td>
<td>1,808</td>
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<tr>
<td></td>
<td>Admissions</td>
<td>492</td>
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<td></td>
<td>Average Length of Stay</td>
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Texas Health (Presbyterian) Dallas

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<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Births</td>
<td>5159</td>
<td>5144</td>
<td>5008</td>
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<tr>
<td>Admissions</td>
<td>713</td>
<td>688</td>
<td>728</td>
</tr>
<tr>
<td>Average Length of Stay</td>
<td>22</td>
<td>22.6</td>
<td>21.8</td>
</tr>
</tbody>
</table>

FETAL Program

<table>
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<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referrals</td>
<td>176</td>
<td>219</td>
<td>174</td>
</tr>
</tbody>
</table>

Current Grant Support

Luc Brion

**Grantor:** CCRAC  
**Title of Project:** Optimizing Individual Nutrition in Preterm Very Low Birth Weight Infants  
**Role:** Principle Investigator  
**Dates:** 2/11/2015 – 2/10/2017

Vishal Kapadia

**Grantor:** NIH – NICHD K23  
**Title of Project:** Low versus High Transitional Oxygen Saturation Targets for Preterm Resuscitation in the Delivery Room: A Randomized Controlled Trial  
**Role:** Principle Investigator  
**Dates:** 9/01/2016 – 8/31/2020

Julie Mirpuri

**Grantor:** NIH – NIDDK K08  
**Title of Project:** Impact of maternal high fat diet on the gut microbiota and Th17 axis in offspring  
**Role:** Principle Investigator  
**Dates:** 9/15/2014 – 7/31/2017

**Grantor:** Children’s Medical Center Foundation - CCRAC  
**Title of Project:** Maternal high fat diet and effect on the gut microbiota and IL-17 response in offspring  
**Role:** Principle Investigator  
**Dates:** 4/1/2016 – 3/31/2018

Rashmin Savani

**Grantor:** NIH National Center for Advancing Translational Science (NCATS) – Therapeutics for Rare and Neglected Diseases (TRND)  
**Title of Project:** Therapy to Prevent Bronchopulmonary Dysplasia in Preterm Infants  
**Role:** Co-Investigator (PI: Eravon Therapeutics, Inc.)  
**Dates:** 1/1/2017 – 12/31/2018

Myra Wyckoff

**Grantor:** NIH  
**Title of Project:** NICHD Cooperative Multicenter Neonatal Research Network  
**Role:** Principle Investigator (Brion, Co-I; Heyne, Co-I)  
**Dates:** 4/01/2015 – 3/31/2021
Peer-Reviewed Publications


