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.

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The Department of State Health Services has designated all NICUs covered by the Division of Neonatal-Perinatal Medicine, and the AAP has commended the high 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, hypoxic ischemic encephalopathy and long-term follow-up care. The faculty are also involved in extensive quality improvement projects that aim to improve care. In addition to its own databases, the Division participates in both The Vermont Oxford Network and The Children’s Hospital Neonatal Consortium.

In 2018 the Division welcomed two new faculty members.

Kikelomo Babata, M.D.

Assistant Professor

M.D.
University of Ilorin, College of Medicine, Nigeria, 2004

Postdoctoral Training
Internship and Residency, Pediatrics
Albert Einstein College of Medicine/Bronx Lebanon Hospital, Bronx, NY, 2008-2011
Fellowship, Neonatal-Perinatal Medicine
Tufts Medical Center/ Floating Hospital for Children, Boston, MA, 2015-2018

Interests
Long-term outcomes of extremely preterm infants, perception of outcomes at the border of viability

Timothy Brannon, M.D., M.S.

Associate Professor

B.S.
Baylor University, Waco, TX, 1984

M.D.
UT Southwestern, 1988

M.S.
UT Health Science Center at Houston, School of Biomedical Informatics, 2010

Postdoctoral Training
Internship and Residency, Pediatrics
Fellowship, Neonatal-Perinatal Medicine

Interests
Human-computer interaction, software usability

Honors / Awards

Mackenzie Frost

- Quality Improvement Project Award, Association of Pediatric Program Directors Annual Spring Meeting, Atlanta, GA

Eric Ortigoza

- Society for Pediatric Research (SPR) Young Investigator Coaching Program
Charles Rosenfeld

- Albert Nelson Marquis Lifetime Achievement Award
- Marquis Who’s Who Publications Board

Rashmin Savani

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

Jack Seidel

- Texas Super Doctor, *Texas Monthly Magazine*

Invited Lectures

Lina Chalak

- Grand Rounds, Birmingham, AL, January 2018
  - “New Frontiers in HIE Stratification and Management”
- Grand Rounds, Nationwide Children’s Hospital, Columbus, OH, September 2018
  - “New Frontiers in HIE Research”
- NEURONICU Advanced Conference-Advanced Applications of NIRS in Asphyxia, Stanford Medical Center, Stanford, CA, September 2018
  - “Mild HIE Updates”
  - “NIRS Wavelet Clinical and Research Applications”
  - “NIRS and EEG Case Series”
- Swan Conference, Temple, TX, September 2018
  - “SWAN Risk Factors, Clinical Aspects and Biomarkers of Neonatal Encephalopathy”
- Research Grand Rounds, University of San Francisco, San Francisco, CA, October 2018
  - “Mild HIE: Should We Cool?”

Roy Heyne

- University of Dallas, Dallas, TX, March & October 2018
  - “Ethical Ramifications of Human Embryology and Fetal Development”

Julie Mirpuri

- Pediatric Grand Rounds, Department of Pediatrics, Children’s Health, Dallas, TX, November 2018
  - “The Neonatal Gut Microbiome: Development and Consequences”

Laura Rubinos

- Aghia Sofia Children’s Hospital, Athens, Greece, May 2018
  - “Nutritional Strategies in Late Preterm Infants”
- Universidad Autonoma de Nuevo Leon, Monterrey, Mexico, May 2018
  - “Strategies to Improve Neurodevelopmental Outcomes of Premature Infants”
- Hospital Infantil Privado, Mexico City, Mexico, June 2018
  - “Strategies to Improve Neurodevelopmental Outcomes of Premature Infants”
- Baylor University, Waco, TX, October 2018
  - “Preemie Talk: The Effects of Maternal-Infant Separation and Neurodevelopment in Preterm Infants”
- XV Congreso Internacional Temas Selectos de Neonatología, Tuxtla Gutierrez, Chiapas, Mexico, October 2018
  - “The Effects of Sedation on Neurodevelopmental Outcomes in Premature Infants”
  - “Management of Congenital Diaphragmatic Hernia: An Update on Management”
  - “Strategies to Improve Neurodevelopmental Outcomes of Premature Infants”
- XIII Congreso Internacional de Neonatología, Puebla, Puebla, Mexico, October 2018
  - “Language Development in Premature Infants”
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- “The Golden Hour”
- “The Effects of Sedation on Neurodevelopmental Outcomes in Premature Infants”

Rashmin Savani

- 1st Federation of European Biochemistry Societies (FEBS), Patras, Greece, September-October 2018
  - Advanced Lecture Course on Extracellular Matrix: “Cell Regulation, Epigenetics and Modeling”
    - Extracellular Superoxide Dismutase (EC-SOD) knockout mice have worse alveolarization, inflammation and cytokine elaboration after neonatal hyperoxia exposure

Joseph Schneider

- Association of Medical Directors of Information Systems, Ojai, CA, June 2018
  - “Newborn Screening: Moving from the Stone Age to an Informatics Paradigm”
  - “Financial Reporting: Why CMIOs Need to Understand this Stuff?”

Julide Sisman

- Scott & White Annual Neonatal Conference, Temple, TX, September 2018
  - “Basal Ganglia and Thalamic Injuries in Preterm Infants”
- Conference on Medical Imaging and Case Reports, Baltimore, MD, October 2018
  - “Lenticulostriate Vasculopathy in Preterm Infants: A New Classification, Clinical Associations and Neurodevelopmental Outcome”

Phyllis Wan-Huen

- No Pain Labor and Delivery Global Health Initiative, Fushan and Suzhou, China, January-February 2018
  - “NRP education with No Pain Labor and Delivery Medical Mission Group”

Myra Wyckoff

- 2018 NeoPREP Conference, Atlanta, GA, January 2018
  - “Asphyxia and Resuscitation”
  - “Exploring Ethical Dilemmas – Genetic Testing and Care of Infants with Congenital Anomalies”
  - “Current Controversies in the Delivery Room”
- Cochrane Neonatal Webinar, March 2018
  - “Grading the Quality and Strength of the Evidence. How ILCOR Utilizes GRADE to Formulate International Resuscitation Guidelines”
- New Zealand Resuscitation Council NZ Resus-2018 Conference, Wellington, New Zealand, April 2018
  - “What’s the Science and Should We Even Do It?”
  - “State of the Art Science in Support of Medications During Neonatal Resuscitation”
- Grand Rounds, Ohio State University Nationwide Children’s Hospital, Columbus, OH, October 2018
  - “Resuscitation of the Newly Born Preterm Infant: The Golden Minutes”

Conference Presentations

Pediatric Academic Societies Meeting, Toronto, Canada, May 2018

Abby N, Mashruwala V, Ramon E, Ibrahim J, Weydig H, Mir I, Wyckoff M, Kapadia V

- Poster, “Heart Rate Evaluation and Resuscitation Trial in Preterm Neonates (HEART) – A Randomized Trial”


- Poster, “Neurodevelopmental Outcomes at 18-22 Months of The PRIME Infants with Mild Hypoxic-ischemic encephalopathy: Is it Really “Mild”?”
- SIGG Neuronicu Symposium, “The Conundrum of Mild NE: Reviewing the Evidence”
Chalak L, Nguyen KA, Heyne R; Laptook A, Shankaran S, et al.
- Poster, “Prospective Outcomes in Infancy Following Mild Hypoxic-ischemic Encephalopathy (PRIME): A Contemporary Cohort”

Cortelyou C, Mir I, Brown L, Chalak L
- Poster, “Placental Pathology, Cerebral Blood Flow and Brain Injury in Preterm Infants: Is there a Link?”

Foglia E, Jensen E, Wyckoff M, Sawyer T, Topijan A, Ratcliffe S
- Poster, “Gestational-Age Specific Survival Following Delivery Room Cardiopulmonary Resuscitation: Results from a National Registry”

Frost M, Brion L
- Poster, “Validity of Pooled Faculty Evaluations in a Neonatal-Perinatal Fellowship Program”

Frost M, Scarborough A, Austin A, Brion L
- Platform Presentation, “Comparing Combined Weighted Ordered Rank Lists to Traditional Evaluation Methods for Creation of Rank Lists for Neonatal Fellowship Applicants”
- Platform Presentation, “A Quality Improvement Project to Improve Timeliness of Submission of Fellow Evaluations by Neonatology Faculty”
- “Improving Timeliness of Submission of Fellow Evaluations by Neonatology Faculty”

Heyne T, Heyne R
- Poster Symposium, “Diagnosing the Moche: Pre-Colombian Portraits of Pediatric Disease”
- Poster Symposium, “200 Years of Auscultation: Rene Laennec, Inventor of the Stethoscope”

Hoge M, Hoppe E, Clark H, Walker K, Fievrier J, Bollers L, Ramon E, Fink M, David Lee D, Frost M
- Poster, “A Quality Improvement Project to Improve Assessment of Parental Stress in NICU”

Ibrahim J, Frost M
- Poster Symposium, “How Baby Side-shows in Fairs and Amusement Parks Helped Warm Our “Weaklings”

- Poster, “Extracellular Superoxide Dismutase (EC-SOD) Knockout Mice have Worse Alveolarization, Inflammation and Cytokine Elaboration After Neonatal Hyperoxia Exposure”

- Poster, “Determining Early Predictors of Longer Length of Treatment for Infants with Neonatal Abstinence Syndrome”

Kakkilaya V, Jubran I, Bautista S, Mangona KL, He H, Brown LS, Savani R, Kapadia V
- Poster, “Development of a Predictive Model for Failure of Continuous Positive Airway Pressure (CPAP) in Preterm (PT) Infants with Respiratory Distress Syndrome (RDS)”

- Platform, “BradyPrem Study: Heart Rate is Most Vital of Vital Signs During Resuscitation of Preterms”

Mir I, Brown LS, Heyne R, Rosenfeld C, Kapadia V
• Poster, “Impact of Placental Histopathology on Bronchopulmonary Dysplasia (BPD) and Neurodevelopmental Impairment (NDI) in Preterm (PT) Infants < 29 weeks Gestational Age (GA)”

Mir I, Chalak L, Rosenfeld C

• Poster, “Reference Levels and Placental Clearance of Neurobiomarkers UCH-L1 and GFAP in Umbilical Cord Blood of Healthy Term Neonates and Those with Neonatal Encephalopathy (NE)”

Mirpuri J, Thomas S, Kumar D, Hooper L, Savani R

• Poster, “Empiric Antibiotics Increase Susceptibility to K. pneumoniae Induced Sepsis Through an Expansion of Proteobacteria and Suppression of ILC type 3 Cells in Neonatal Mice”

Pavageau L, Chalak L, Brown L

• Poster, “Can the Neurological Exam Forms Designed to Screen for Neuroprotective Therapies in Term Infants Be Used in Preterm Infants Born 32 to 35 Weeks Gestation? A Validation Study”

Savani R

• Symposium Chair: “The Inflammation Superhighway: Tolls, Signals & Pathways”
• Invited Science Presentation, “IL-1RA in the Therapy of BPD: An Update”
• Symposium Presentation, “Inflammsome Blockade for the Prevention of BPD”

Sisman J, Chalak L, Brown L, Pritchard M, Weakley D, Rosenfeld C

• Poster, “Low Gestational Age (GA) and Respiratory Distress Syndrome (RDS) Are Associated with Progression of Lenticulostriate Vasculopathy (LSV) in Preterm Infants”

Smithhart W, Wyckoff M, Kapadia V, Jaleel M, Kakkilaya V, Brown L, Brion L

• Poster, “Association of Symptomatic Pneumothorax in Term and Late-Preterm Infants with Continuous Positive Airway Pressure (CPAP) in the Delivery Room”

Strand M, Simon W, Wyllie J, Wyckoff M, Weiner G

• Poster, “Consensus Outcome Rating for International Neonatal Resuscitation Guidelines”

Weydig H, Frost M, Mambrambath J, Burchfield P, Brion L

• Poster, “Interaction Between Prophylactic Indomethacin (PIndo) and Antenatal Steroids (ANS) Leading to Spontaneous Intestinal Perforation (SIP)”

Weydig H, Jaleel M, Frost M, Burchfield P, Brion L

• Poster, “A Quality Improvement (QI) Project to Reduce Severe Intraventricular Hemorrhage (IVH)”

Williams J, Frost N, Frost M

• Poster, “Providing a Brief “Reflection Period” After Prenatal Consultation: Effects on Parental Recall and Self-Reported Comprehension”

Wyckoff M

• Invited Science Presentation, “Targeted Goals and Monitoring During Neonatal Resuscitation”

• Poster, “Exploring Potential Indications for Tracheostomy and Chronic Mechanical Ventilation in Patients with Severe Bronchopulmonary Dysplasia”

Other Conferences

• Eastern Society for Pediatric Research Pennsylvania and New England Perinatology Society, Massachusetts, March 2018
  o Oral Presentation, “Socio Emotional Outcomes of Extremely Low Gestational Age Newborns with Late-onset Bacteremia at 10 Years of Age”

Brion LP, Rosenfeld CR, Heyne R, Brown LS, Lair C, Burchfield P
• AAP National Conference & Exhibition, Section on Neonatal-Perinatal Medicine, Orlando, FL, November 2018
  o Poster Presentation, “Quality Improvement Project Designed to Decrease Weight-Length Disproportion at Discharge in Very Preterm Infants”

Cortelyou C, Mir I, Chalak L
• Southern Society for Pediatric Research (SSPR), Southern Regional Meeting, New Orleans, LA, February 2018
  o Platform Presentation, “Cerebral Blood Flow and Brain Injury of Preterm Infants <32 Weeks”

DeSpain K, Song J, Rosenfeld, CR, Carlson D, Wolf S
• American Burn Association, Chicago, IL, April 2018
  o Oral Presentation, “Vascular Smooth Muscle Dysfunction After Burn”

Ennis B
• Texas College of Emergency Physicians Connect Conference, Houston, TX, April 2018
  o Lab Moderator, “Neonatal Resuscitation Skills”

Frost M
• Association of Pediatric Program Directors Spring Meeting, Atlanta, GA, March 2018
  o Invited Speaker, “Improving Timeliness of Submission of Fellow Evaluations by Neonatology Faculty”
  o Poster, “Validity of Pooled Faculty Evaluations in a Neonatal-Perinatal Fellowship Program”
  o Poster, “Comparing Combined Weighted Ordered Rank Lists to Traditional Evaluation Methods for Creation of Rank Lists for Neonatal Fellowship Applicants”
  o Workshop, “Getting the most out of ERAS for your best recruitment season ever!”

Frost M, Austin A, Scarborough A, Brion LP
• Association of Pediatric Program Directors (APPD), Orlando, FL, November 2018
  o Oral Presentation, “A Quality Improvement Project to Improve Timeliness of Submission of Fellow Evaluations by Neonatology Faculty”

Frost M, Brion LP
• Association of Pediatric Program Directors (APPD), Orlando, FL, November 2018
  o Poster Presentation, “Validity of pooled faculty evaluations in a neonatal-perinatal fellowship program”

Frost M, Scarborough A, Austin A, Brion LP
• Association of Pediatric Program Directors (APPD), Orlando, FL, November 2018
  o Poster Presentation, “Comparing Combined Weighted Ordered Rank Lists to Traditional Evaluation Methods for Creation of Rank Lists of Neonatal Fellowship Applicants”

Itriago E, Rubinos L
• Children’s Hospital Neonatal Consortium Annual Symposium (CHNC), Columbus, OH, October 2018
  o Poster Presentation, “Optimizing Pain and Sedation Practices for Neonates and Infants in the NICU”

Pavageau L, Brion L, Brown LS, Rosenfeld CR, Jaleel MA
• Southern Society for Pediatric Research (SSPR), Southern Regional Meeting, New Orleans, LA, February 2018
Rubinos L, Dariya V, Packard C, Heyne R
- Children’s Hospital Neonatal Consortium Annual Symposium (CHNC), Columbus, OH, October 2018

Rubinos L, Lanehart K, Gaines J, Barnett A, Tidwell J
- Children’s Hospital Neonatal Consortium Annual Symposium (CHNC), Columbus, OH, October 2018
  - Poster Presentation, “Increasing Follow Up Rates for Tertiary and Quaternary Level NICU Patients: A Quality Improvement Initiative”

Savani, R
- 2018 Telemedicine Summit for Hospitals, Las Vegas, NV, September 2018
  - “New Approaches to Telemedicine within Neonatal Care”
- 2018 Children’s Hospitals Neonatal Consortium Meeting, Columbus, OH, October 2018
  - “TeleNICU: Extending the Reach of Level IV Care and Optimizing the Triage of Patient Transfers”
- 2018 American Society for Matrix Biology, Las Vegas, NV, October 2018
  - “Extracellular Superoxide Dismutase (EC-SOD) Knockout Mice Have Worse Alveolarization, Inflammation and Cytokine Elaboration After Neonatal Hyperoxia Exposure”

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 Thrive Clinic
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
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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 mediatros 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 40 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. The 96-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.

- **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 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, home-like 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 has skilled developmental specialists and pediatricians to 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

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<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
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<tbody>
<tr>
<td><strong>Parkland Health &amp; Hospital System</strong></td>
<td></td>
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<tr>
<td>Births</td>
<td>10,686</td>
<td>12,441</td>
<td>12,424</td>
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<td>NICU Admissions</td>
<td>1,316</td>
<td>1639</td>
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<td>1960</td>
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<td>713</td>
<td>688</td>
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**FETAL Program**

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**Current Grant Support**

**Luc Brion**

**Grantor:** Gerber Foundation  
**Title of Project:** Individualizing and Optimizing Nutrition to Prevent Metabolic Syndrome and to Improve Neurodevelopment in Preterm and Small for Gestational Age Infants  
**Role:** Principal Investigator  
**Dates:** 07/2015 – 07/2019

**Grantor:** CCRAC  
**Title of Project:** Optimizing Individual Nutrition in Preterm Very Low Birth Weight Infants  
**Role:** Principal Investigator  
**Dates:** 02/2015 – 02/2020

**Grantor:** University of Rochester  
**Title of Project:** Facilitation of IRB Review for Multi-Site Clinical Research  
**Role:** Principal Investigator  
**Dates:** 09/2017 – 05/2018

**Lina Chalak**

**Grantor:** NIH-NINDS  
**Title of Project:** A Novel Wavelet Neurovascular Bundle for Real Time Detection of Injury in Neonatal Encephalopathy  
**Role:** Principal Investigator  
**Dates:** 07/2017 – 06/2022

**Grantor:** University of California  
**Title of Project:** HEAL – High Dose Erythropoietin for Asphyxia and Encephalopathy  
**Role:** Principal Investigator  
**Dates:** 07/2018 – 06/2019

**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:** Principal Investigator  
**Dates:** 05/2016 – 04/2020

**Grantor:** AAP-NRP  
**Title of Project:** Novel Transitional Goal Saturations for Preterm Resuscitation in the Delivery Room  
**Role:** Principal Investigator  
**Dates:** 08/2014 – 08/2018

**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:** Principal Investigator  
**Dates:** 09/2014 – 08/2018

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:** Principal Investigator  
**Dates:** 04/2016 – 03/2019

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:** 01/2017 – 12/2018

Grantor: Ikaria Therapeutics  
**Title of Project:** Inhaled NO in Neonatal Asphyxia  
**Role:** Co-Investigator (PI: Eravon Therapeutics, Inc.)  
**Dates:** 11/2010 – 12/2019

Myra Wyckoff  
Grantor: NIH  
**Title of Project:** NICHD Cooperative Multicenter Neonatal Research Network  
**Role:** Principle Investigator (Brion, Co-I; Heyne, Co-I)  
**Dates:** 04/2015 – 03/2021

**Peer-Reviewed Publications**


**Book Sections**


