Division Spotlight: Pediatric Cardiology

The Joint Division of Pediatric Cardiology is now made up of 11 subspecialty trained physicians who are affiliated with the University of Nebraska Medical Center, Creighton University, and Children's Hospital & Medical Center. The members of the division have experience as staff pediatric cardiologists ranging from one year to several decades. They are united by their commitment to providing the highest quality cardiac care to patients with congenital and acquired cardiac and cardiovascular disorders ranging in age from young adulthood to the unborn baby suspected of having a cardiac abnormality.

The team works closely with the Division of Pediatric Cardiovascular Surgery from Children's Hospital & Medical Center and UNMC in caring for children born with all forms of structural heart defects including those with the most severe and complicated malformations. The team performs over 8000 imaging studies, 400 cardiac catheterizations, and 300 cardiac surgical procedures with outcomes comparable to any program in the country, regardless of the degree of complexity. Although the majority of catheterization and cardiac surgical work is done at our base location at Children's Hospital, in older patients, these procedures are often performed at UNMC.

The members of the pediatric cardiology division are extremely active in outreach clinic activities. From as far away as Rapid City South Dakota to as close as West Village Pointe and Lincoln, nine clinics are staffed by all of the members of the division and there were over 1400 outreach patient encounters in 2012.

Several members of the division actively participate, and are leaders of, the National Pediatric Cardiology Quality Improvement Collaborative, a multi-center national and international QI initiative sponsored by the Joint Council of Congenital Heart Disease.

The past year alone has brought tremendous growth and change to the division. Three new recruits, Dr. Jennifer Hickman in cardiovascular imaging, Dr. Steven Kindel in cardiac transplantation and advanced heart failure, and Dr. Robert Spicer chief of cardiology; bring added commitment, training, and expertise to a staff united by their goal of being a premier center for pediatric cardiac care. The division will begin a cardiology fellowship program in July.
of 2013 with the admission of their first two fellows in training. The United Network for Organ Sharing granted approval for Children's Hospital and the division of pediatric cardiology to begin performing cardiac transplantation. The first successful transplant was performed in the spring of 2013. With the opening of the fetal care Center at Children's Hospital in the fall of 2012, the division saw a culmination of the efforts of many to provide state-of-the-art interventional and cardiac surgical care to neonates requiring emergent cardiovascular evaluation and treatment at the time of delivery.

Additionally, the division has worked closely with the adult cardiology program at University of Nebraska Medical Center to collaborate in the areas of imaging, electrophysiology and pacing, interventional catheterization, heart failure/transplantation, and most recently adult congenital heart disease. Our team is committed to the optimal transitioning of the pediatric cardiac patient to highly-skilled adult cardiac care providers.

The division of pediatric cardiology remains committed to changing outcomes in pediatric cardiac care through scientific investigation. The division has 30 active IRB protocols and has internal and extramural grants support totaling over one-half a million dollars. Grants support comes from the American Heart Association, American College of cardiology, industry partnership, Children's Hospital Foundation, and private Foundation support.

Pediatric Cardiology Faculty and Staff

Faculty

- David A. Danford, MD; Professor, Pediatrics
- Jeffrey W. Delaney, MD; Associate Professor, Pediatrics
- Christopher C. Erickson, MD; Professor, Pediatrics and Internal Medicine
- Scott E. Fletcher, MD; Professor, Pediatrics - Creighton University
- Carl H. Gumbiner, MD; Professor, Pediatrics
- Hao "Howard" H. Hsu, MD; Assistant Professor, Pediatrics
- Jennifer A. Hickman, MD; Assistant Professor, Pediatrics
- Steven J. Kindel, MD; Assistant Professor, Pediatrics
- John D. Kugler, MD; D.B. and Paula Varner Professor of Pediatrics; Professor, Internal Medicine
- Shelby Kutty, MD; Associate Professor, Pediatrics, Physiology and Radiology
- Robert L. Spicer, MD; Professor, Pediatrics
- Shane Tsai, MD; Assistant Professor, Internal Medicine and Pediatrics

Health Care Staff

Allied Health Professionals:

- Tamara A. Dolphens, PA-C
- Barbara E. Roessner, PA-C
- Britni L. Stevens, PA-C

Nurses

- Venus Anderson, RN
- Cynthia Foster, RN, BSN
- Kris Houston, RN, BSN, MSN
- Joan O'Neill, RN, BSN
• Cynthia Scott, RN, BSN
• Jennifer Strawn, RN, BSN
• Steve Hromas, RN, BSN

**Cath Lab**

• Stacey Froemming, MHA, RCIS
• Cathy Greco, RN, BSN
• David Meyers, RRT
• Rebecca Reedy, R.T.(R)(VI)RCIS
• Heather Reese, RN, BSN

**Cardiac Diagnostics**

• April Bourn, RDCS, AS
• Lori Kuss, RDCS, RDMS, AS
• Mora Link, RDCS, BS
• Brenda Norris, RDCS
• Amanda Polak, RDCS
• Jamey Turco, RDCS, BS
• Sheila Urbach, RDCS
• Cassie Phillips, BS
• Margaret Weber, BA
• Andy Marking, RT, BS

**Administrative Staff**

• Susan Walsh, RN, MHSA - Cardiac Service Line Director
• Gary Felix, BS - Cardiac IT Administrator
• Priscilla Phillips, BAC - Administrator/Fellowship Program Coordinator
• Loralee Amandus, Medical Secretary III
• Melissa Dorr, Medical Secretary III
• Kristi Graybill, Medical Secretary III
• Jodi Remar, Medical Secretary III
• Kati Kennedy, Medical Secretary II
• Barb Talmon, Medical Secretary II
• Lisa Knapp, Transcriptionist
• Melissa Goede, Patient Scheduler
• Abby Pflueger, Patient Scheduler

**Pediatric Cardiology Research**

**Pediatric Cardiology Grants**

• Microbubble Enhanced Sonothrombolysis and Thromboprophylaxis of Pediatric Central Venous Catheters. Sponsor: American College of Cardiology Foundation/Pfizer
• Medically Handicapped Children's Program, providing outreach patient services through-out the state of Nebraska. Sponsor: Nebraska Department of Health & Human Services.
• Assessment of Right and Left Ventricular Fluid Energetics and Myocontractility Indexes in a Porcine Model of Right Ventricular Remodeling
• The Effect of Restrictive Right Ventricular Physiology on Clinical Outcomes. Sponsor: Children's Hospital Foundation
**Pediatric Cardiology Clinical Trials**  
**David Danford**, Principal Investigator

- The modified natural history of congenital heart disease: a retrospective analysis of outcomes in congenital heart disease

**Jeffrey Delaney**, Principal Investigator

- Comparison Between Surgical versus Balloon angioplasty versus Intravascular Stent Placement for Recurrent or Native Coarctation
- Gore HELEX Septal Occluder Post Approval Study
- Compassionate Use of the Covered Cheatham-Platinum Stent for Treatment of Aortic Arch Abnormalities COAST Trial
- Melody Transcatheter Pulmonary Valve and Ensemble Transcatheter Valve Delivery System
- Compassionate Use of the Covered Cheatham-Platinum Stent for Treatment of Aortic Arch Abnormalities - (Use #2)
- Compassionate Use of the Covered Cheatham-Platinum Stent for Treatment of Aortic Arch Abnormalities - (Use #3)
- Compassionate Use of the Covered Cheatham-Platinum Stent for Treatment of Aortic Arch Abnormalities - (Use #4)
- Compassionate Use of the Covered Cheatham-Platinum Stent for Treatment of Pulmonary Conduit Stenosis with Medtronic Melody Valve Implantation (Use #1)
- Compassionate Use of the Covered Cheatham-Platinum Stent for Treatment of Pulmonary Conduit Stenosis with Medtronic Melody Valve Implantation (Use #2)
- Compassionate Use of the Covered Cheatham-Platinum Stent for Treatment for Dilation of a Baffle Stenosis
- Compassionate Use of the Covered Cheatham-Platinum Stent for Treatment of Pulmonary Conduit Stenosis with Medtronic Melody Valve Implantation (Use #3)
- Compassionate Use of the Covered Cheatham-Platinum Stent for Treatment of Pulmonary Conduit Stenosis with Medtronic Melody Valve Implantation (Use #4)

**Shelby Kutty**, Principal Investigator

- Quantification of ventricular mechanics and myocardial blood flow reserve in adolescents and adults ages 12-50 with congenital or acquired heart disease using supine bicycle stress with real time myocardial contrast ECHO and/or dobutamine stress perfusion MRI
- Evaluation of the complex interactions between right ventricle and tricuspid valve function in patients with hypoplastic left heart syndrome: a longitudinal study. Multi-center trial (Edmunton study)
- Volumetric Analysis of Left and Right Ventricles in Single and Dual Circulation Using Live Three-Dimensional Echocardiography
- Right Atrial Volumetrics as a discriminator between stretched Patent foramen ovale and Secundum atrial septal defect
- Assessment of Myocardial Mechanics in Subjects after Transcatheter or Surgical Therapy for Aortic Valve Disease and Coarctation of the Aorta
- Assessment of Atrial Mechanics and its Relationship with Pressure and Volume Overload in Children: A Two Dimensional Speckle Tracking Echocardiography Study
- Molecular Studies of the Metabolic Pathways of Right Ventricular Hypertrophy and the Ionic Changes in Ductal Arteriosus Smooth Muscle Cells
- Investigation into Cellular and Molecular Mechanisms of Pulmonary Arteriovenous Malformation Development and the Role of the Liver in Pulmonary Vascular Homeostasis
- Assessment of Parameters of Systolic and Diastolic Ventricular Function in a Normal Pediatric Population
- Assessment of Right Ventricular Volume using the Ventripoint Medical System in Patients with Tetralogy of Fallot Following Repair; A Comparison Study to cMRI
- Two-stage Biventricular Rehabilitation for Critical Aortic Stenosis with Severe Left Ventricular Dysfunction
- Comparative Efficacy of Skimmed Breast Milk and Alternative Low-Fat Formula in the Treatment of Post-Cardiac Surgery Chylothorax
- Safety of Magnetic Resonance Imaging in Patients with Stainless Steel Embolization Coils
- Assessment of Tricuspid Valve Failure mechanisms, Right Heart Volumes and Function Post Orthotopic Heart Transplantation
- Aortic Stenosis: Comparing Cardiac Catheterization and Echocardiographic Measurements in the Pediatric Population

**Pediatric Cardiology Clinics**

Children's Hospital & Medical Center
Specialty Pediatric Center
8200 Dodge Street - 2nd floor
Scheduling: 402-955-4339
Monday - Friday 8:00-4:30

Children's Hospital & Medical Center
West Village Pointe - Specialty Pediatric Center
110 North 175th Street, Suite 1100
Scheduling: 402-955-4339
Hours vary

**Pediatric Cardiology Satellite Clinics**

**Nebraska**
*CCH Pediatric Clinic (5-6/year)*
3775 45th Ave
Columbus, NE 68601
Phone: 402-564-7200
Contact: Maddie
Scheduling: CH 402-955-4339

*Grand Island Clinic (6/year)*
2444 W. Faidley, Box 550
Grand Island, NE 68802
Phone: 308-382-1100
Contact: Sandra
Scheduling: Grand Island Clinic

*Mary Lanning Hospital (4-5/year)*
715 N St. Joseph Avenue
Hastings, NE 68901
Phone: 402-460-5884 Opt. #1
Contact: Gina, Kelly or Trish
Scheduling: Mary Lanning Hospital
Kearney Clinic (6/year)
211 W 33rd Street
Kearney, NE 68847
Phone: 308-865-2141
Contact: Shirley
Scheduling: CH 402-955-4339

Lincoln Specialty Clinic (2Xs/month)
4445 S 86th Street
Lincoln, NE 68526-9225
Phone: 402-486-1500
Contact: Connie Honke
Scheduling: CH 402-955-4339

Norfolk Medical Group (12/year)
301 N 27th Street, #1
Norfolk, NE 68701
Phone: 402-844-8000 Ext. 4020
Contact: Judy Ernst
Scheduling: Norfolk Medical Group

Adolescent & Child Care Specialist (6/year)
120 McNeel Lane
North Platte, NE 69101
Phone: 308-534-9230
Contact: Ashley
Scheduling: Adolescent & Child Care Specialist

South Dakota
Avera Children’s (6/year)
1001 E 21st Street, Ste 010
Sioux Falls, SD 57105
Phone: 605-322-3666
Scheduling: CH 402-955-4339

Black Hills Pediatrics & Neonatology (2Xs/month)
2905 5th Street
Rapid City, SD 57701
Phone: 605-341-7337
Contact: Wanda
Scheduling: Black Hills Pediatrics & Neonatology