Pediatric Cardiology Fellowship Training Program
Children’s National Health System

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http://www.childrensnational.org/cardiology-fellowship

Program Overview

The Pediatric Cardiology Fellowship at Children’s National is an ACGME-accredited program committed to the training of outstanding physicians dedicated to the care of patients with pediatric cardiovascular disease. During the program, fellows develop skills in clinical care, research, and teaching over a 36-month period. Fellows benefit from the vast expertise of and dedicated teaching by faculty from the Division of Cardiology as well as the other programs within the Children’s National Heart Institute.

The CNHI is a multidisciplinary team comprising Cardiology, Cardiovascular Surgery, Cardiac Intensive Care, and Cardiac Anesthesia. It is a national and international referral center and is the largest congenital heart program in the mid-Atlantic region. Our diverse patient population offers a robust clinical experience in all facets of pediatric cardiology. Our research benefits from the resources of Children’s National including the Children’s Research Institute, the Sheikh Zayed Institute for Pediatric Surgical Innovation, the Children’s National Global Health Initiative, and the Clinical and Translational Science Institute, a partnership with George Washington University. We maintain strong collaborations with the National Institutes of Health’s National Heart, Lung, and Blood Institute and Washington Hospital Center. Children’s National is also a member of the Pediatric Heart Network.

Fellowship Curriculum

An approximate breakdown of the fellowship schedule is shown below:

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<thead>
<tr>
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<th>Year One</th>
<th>Year Two</th>
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<td>Nights</td>
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<tr>
<td>Vacation</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>12</td>
</tr>
</tbody>
</table>

*During the 2nd and 3rd years of training, inpt and consults are performed together
*Variations in the calendar may result in weeks not equaling 52.
**Clinical Rotations**

Clinical rotations include:

- Cardiology Inpatient Service (Heart and Kidney Unit (HKU))
- Inpatient Consultation Service
- Cardiac Intensive Care Unit (CICU)
- Imaging (Echo, fetal cardiology, MRI, CT)
- Cardiac Catheterization
- Electrophysiology
- Subspecialty: Adult Congenital Heart Disease; Heart Failure and Transplant; and Pulmonary Hypertension

Fellows participate in outpatient continuity clinic for one half day per week during their first year and for one full day every other week during their second and third years. Training during the third year includes a “pre-attending” on-service experience, and elective experiences are offered to tailor the year to meet individual training goals.

**On call responsibilities** for the cardiology fellowship are performed predominantly through a night float system, which allows for continuity of care without sacrificing time from clinical and research duties. Monday night through Saturday night coverage is provided by an in-house cardiology fellow. Saturday day shift and Sundays are covered by an additional fellow, allowing for continuity of care over the weekend. Sunday overnight call may be performed at home if the clinical service allows. Call responsibilities include coverage of cardiology service and consult patients, new consults throughout the hospital and in the Emergency Department, parent phone calls, and assisting in the Cardiac Intensive Care Unit as needed. On call fellows may also spend time performing echocardiograms and participating in cardiac catheterizations and electrophysiology procedures as they arise. Fellows are on call for approximately four weeks of night float and four additional weekends per year.

The cardiology fellowship program is supportive of and compliant with all ACGME duty hour standards.

**Research Time**

Approximately 12 of the 36 months of training are dedicated to research, mostly divided between the second and third years. Opportunities for clinical and basic science research are available with Children’s National faculty in Cardiology and other divisions as well as at the Children’s Research Institute, the Sheikh Zayed Institute for Pediatric Surgical Innovation, Washington Hospital Center, George Washington University, Georgetown University, and the National Institutes of Health. Fellows are supported to present their research at national meetings and for publication in peer-reviewed journals.

In 2010, Children’s National was awarded the prestigious Clinical and Translational Science Award (CTSA) grant from the National Center for Advancing Translational Sciences (NCATS) to establish the Clinical and Translational Science Institute at Children’s National (CTSI-CN). This was the first such funding awarded directly to a freestanding children’s hospital. Fellows benefit from statistical support for their projects through this grant. In 2020, Children’s National will open its new Research and Innovation Campus on the site of the historic former Walter Reed Army Medical Center, including the new JLABS collaboration with Johnson & Johnson.
**Fellow Research**

Our fellows have been extremely successful in their academic endeavors during their training. They routinely publish manuscripts in peer-reviewed journals and present their work at national meetings. Highlights of our fellows’ recent research are shown below:

**Class of 2019**

**Publications**


**Presentations**

Rohan Kumthekar:


Native T1 Values Can Identify Pediatric Patients with Myocarditis. Poster presentation at 2018 Society for Cardiovascular Magnetic Resonance, Barcelona, Spain.

Deepa Mokshagundam:

Cardiac Changes in Pediatric Cancer Survivors. Poster presentation at the 2019 American College of Cardiology Scientific Sessions, New Orleans, LA.

Ultra-High Frequency Echocardiography for Phenotyping Mutant Mouse Embryos with Cardiac Dysfunction. Poster presentation at the 2018 American Society of Echocardiography Scientific Sessions, Nashville, TN.


Neeta Sethi:

T2 Mapping in the Surveillance of Acute Allograft Rejection in Pediatric Cardiac Transplant Patients. Poster presentation at 2018 Society for Cardiovascular Magnetic Resonance, Barcelona, Spain.

Meghan Zimmerman:

Using GBD Data to Help Inform Priorities and Improve Care for Children with Heart Disease in LMIC. Invited oral presentation at 2018 World Congress of Cardiology and Cardiovascular Disease, Dubai.


The Global Burden of Congenital Heart Disease and Nutritional Deficiencies. Oral presentation at the 7th World Congress of Pediatric Cardiology and Cardiac Surgery (2017), Barcelona, Spain.

Global Burden of Congenital Heart Disease. Oral abstract presented at 7th World Congress of Pediatric Cardiology and Cardiac Surgery (2017), Barcelona, Spain.

Awards and Grants
Rohan Kumthekar:
- Paul C. Gillette PACES Research Grant ($10,000) at Heart Rhythm Society 2019
- NIH-NHLBI Grant: PeriPath: A Novel Pericardial Access Tool for Epicardial Pacing and Defibrillation
- Heart Rhythm Society Young Investigator Finalist
- American Heart Association Travel Award
- CNHS Board of Visitors Grant: “PeriTorq: A Novel Tool to Improve the Safety Profile of Cardiac Ablation Procedures in Children”
- Recognition for Excellence in Medical Student Education

Deepa Mokshagundam:
- Recognition for Excellence in Medical Student Education
- American Academy of Pediatrics elected representative

Neeta Sethi:
- Recognition for Excellence in Medical Student Education
- CMR 2018 Regional Travel Award: Travel award from the Society for Cardiovascular Magnetic Resonance to attend the 2018 scientific sessions in Barcelona, Spain.

Meghan Zimmerman:
- George Washington University Milken School of Public Health Scholarship.

Class of 2018
Publications


Siegel B; Olivieri, L; Gordish-Dressman, H; Spurney, C. Myocardial Strain Using Cardiac MR Feature Tracking and Speckle Tracking Echocardiography in Duchenne Muscular Dystrophy Patients. Pediatric Cardiology. 2017.

Presentations

Nimisha Aggarwal:
Intraoperative Magnesium Reduces Postoperative Arrhythmias in Congenital Heart Surgery: Is the Effect Arrhythmia-Specific and Dose-Dependent? Oral presentation at the 2016 American Heart Association Scientific Sessions, New Orleans, LA.


Unusual Presentation for Primary Bacterial Pericarditis. Poster presentation at the American College of Cardiology 2017 Scientific Sessions.


Ashish Doshi:


Subendocardial resting perfusion defect in a case of acute fulminant myocarditis. Platform presentation, Society for Cardiovasc Magnetic Resonance, Barcelona, Spain. February 2018

Bryan Siegel:
Cardiac MRI Feature Tracking In Duchenne Muscular Dystrophy Patients More Frequently Demonstrates Decreased Myocardial Strain Associated With Late Gadolinium Enhancement Positive Segments Compared To Echocardiographic Speckle Tracking. Poster presentation at the 2016 American Heart Association Scientific Sessions, New Orleans, LA.

Awards and Grants

Ashish Doshi:
CMR 2018 Regional Travel Award: Travel award from the Society for Cardiovascular Magnetic Resonance to attend the 2018 scientific sessions in Barcelona, Spain.

American Heart Association Post-Doctoral Fellowship Grant, 2018.

Class of 2017

Publications


Presentations

James Enos:

A Comparison of Right Ventricular Volumes in Children and Adults with Repaired Tetralogy of Fallot - Including and Excluding Right Ventricular Trabeculations. Poster presented at the

Jacob Hartz:


The Triglyceride Response to a Sugar Load Parallels the Glucose Response. Poster presented at the Quality of Care and Outcomes Research (QCOR) Scientific Sessions, 2016.

Tom Loke:


Software Segmentation and Rapid Prototyping of Congenital Heart Defects with Cardiac MRI images. Presented at the Society for Pediatric Radiology 2014 Annual Meeting.

Lauren Tague:


Awards and Grants

Tom Loke:

Children’s National Research Week 2016: Honorable Mention in Clinical Research
**Senior Clinical Fellowships and Advanced Training**

Our program offers senior clinical fellowship opportunities in:
- Advanced Cardiac Imaging
- Cardiac Critical Care (multiple positions)
- Research (through an institutional T32 award)

Additionally, we have trained select internal candidates on an ad hoc basis as senior clinical fellows in:
- Interventional Cardiology
- Electrophysiology
- Global Health (in conjunction with a Master’s of Public Health)

Our Advanced Imaging Fellowship offers training in all advanced modalities including 3D echocardiography, transesophageal echocardiography, strain imaging, fetal cardiology, cardiac MRI, and cardiac CT. Many fellows also choose to pursue formal Critical Care Medicine fellowships after completing training in cardiology. Children’s National is also proud to be one of four American Heart Association Centers of Excellence with a $4M grant including three funded rheumatic heart disease fellowship positions.

Advanced degrees and certificates may be pursued through our affiliation with the George Washington University School of Medicine and Health Sciences. Some of our fellows have pursued Master’s of Public Health degrees at the Milken Institute School of Public Health and coursework in as a part of their academic experience.
**Academic Curriculum**

The fellowship prides itself on a robust schedule of protected time education, including formal fellow lectures, cardiology division conferences, and hospital-wide conferences. Division conferences include Surgical Conference, Catheterization Conference, Journal Club, and Critical Event Review. Fellow conferences incorporate a wide variety of both learning modalities and topics and are relevant to both a robust education in pediatric cardiology as well as the pediatric cardiology board examination. Regular fellow conferences include sessions on echocardiography, electrophysiology, cardiac critical care, core book review, surgical techniques and perspectives, pathology, embryology, and principles of outpatient management. Fellows are also encouraged to attend Pediatric Grand Rounds, Pediatric Professors Rounds, hospital basic science research lectures, and Washington Hospital Center cardiology conferences. A sample month’s conference schedule is included below.

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**Sample Month’s Conference Schedule**

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event Description</th>
<th>Location</th>
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<tbody>
<tr>
<td>1</td>
<td>7:30am</td>
<td>8:00am Surgical Conference (Mandatory)</td>
<td>CLC (Cross)</td>
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<tr>
<td>2</td>
<td>7:00am</td>
<td>8:00am Hearse Conference (Mandatory)</td>
<td>CLC (Sheehan)</td>
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<td>3</td>
<td>7:00am</td>
<td>8:00am Cardiology Learning Center (Mandatory) (Gonzalez)</td>
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<td>7:00am</td>
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**Notes:**

- Regular fellow conferences include sessions on echocardiography, electrophysiology, cardiac critical care, core book review, surgical techniques and perspectives, pathology, embryology, and principles of outpatient management.
- Fellows are also encouraged to attend Pediatric Grand Rounds, Pediatric Professors Rounds, hospital basic science research lectures, and Washington Hospital Center cardiology conferences.
- A sample month’s conference schedule is included above.
Fellows Core Curriculum
The Fellow Core Curriculum is a monthly two-hour block of protected time over lunch with fellows from other specialties throughout the hospital. This well-rounded curriculum includes didactic sessions in biostatistics, manuscript preparation, grant writing, and poster preparation as well as informal meetings to discuss quality improvement activities, ethics, job search skills, and contract negotiating. The FCC meets the ACGME requirements for exposure and training in these important topics. Sessions cover aspects of research, medical education, quality improvement, the business of medicine, and finding a job. Topics include:

- Basics of Biostatistics
- Design of Health Studies
- Healthcare Finance
- Navigating the IRB
- Writing an Abstract
- Poster and Oral Presentations for Scientific Meetings
- Health Advocacy
- Developing a Career Plan
- Manuscript Preparation
- CV Building
- Adult Learning Principles
- Writing Grants
- Quality Improvement Workshops
- Leading a Team
- Job Search Strategies
- Negotiating a Contract

International Opportunities
Dr. Sable has been organizing and leading medical missions to Uganda for over 12 years. What started as a single provider seeing children with heart disease has evolved into a large team including cardiologists, intensivists, anesthesiologists, nurses, perfusionists, and cardiac surgeons. Doctors at the Uganda Heart Institute are now independently performing heart surgery where no such program previously existed. Children’s National is one of four centers to be awarded an American Heart Association Strategically Focused Research Network grant building on our international research expertise. Through this network, Dr. Sable collaborates with experts from Cincinnati Children’s, University of Tennessee, and University of Washington as well as Uganda, South Africa, and Australia for basic, translational, clinical, and population health research in rheumatic heart disease. Many of our fellows have traveled to Uganda for clinical and research trips, where activities have included large-scale screening of children with unrepaired congenital heart disease, post-operative care of cardiac patients, large-scale screening of school children for rheumatic heart disease, assessing the psychosocial impact of rheumatic heart disease, interfacing with local teams to provide care, and importantly, the education of local providers. Our fellowship offers unmatched opportunities for fellows interested in a meaningful global health experience both through the above opportunities and through the Children’s National Global Health Initiative.
Children’s National Heart Institute Programs
A description of select components of the CNHI’s programs is provided below.

**Cardiac Catheterization**
Over 650 cardiac catheterizations per year are performed at Children’s National in our three state-of-the-art digital catheterization laboratories, including balloon dilation, stent placement, coil embolization, endomyocardial biopsies, Melody percutaneous pulmonary valve placement, and ASD and VSD closures. Interventional cardiologists at Children’s National routinely utilize intracardiac echocardiography for guidance during procedures. Our iCMR (interventional cardiac magnetic resonance imaging) suite is one of the only pediatric catheterization laboratories in the world with XFM technology – x-ray fused with magnetic resonance – allowing for specialized imaging during procedures with reduced radiation.

**Cardiac Intensive Care**
The CICU at Children’s National is a 26-bed state-of-the-art unit that cares for surgical and medical patients including neonates, infants, children, and adults with congenital heart disease. This 34,000 square foot unit includes state-of-the-art monitoring equipment, a fully equipped simulation room, and a comprehensive digital media room. Children’s National has a long history as a national leader in extra-corporeal membrane oxygenation (ECMO) and employs other advanced forms of mechanical support including the Berlin Heart ventricular assist device. The CICU is staffed by physicians with backgrounds in cardiology, critical care medicine, and anesthesiology.

**Cardiac MRI**
The Cardiac MRI program at Children’s National is a busy clinical service, performing over 600 cardiac MRIs annually on infants, children, and adults with congenital heart disease. The cardiac MRI program is engaged in cutting-edge research efforts, working with scientists and physicists at the National Institutes of Health to create innovative imaging sequences as well as make current imaging faster and more accurate. Children’s National recently installed a state-of-the-art hybrid fluoroscopy and MRI suite designed to allow for cardiac catheterization under MRI guidance as well as image fusion techniques designed to reduce radiation exposure.

**Cardiac Procedure Recovery Unit**
The CPRU is a team of practitioners specially trained in the procedural and recovery care of infants, children, and adults undergoing cardiac catheterization, electrical cardioversion, and transesophageal and sedated transthoracic echocardiograms.
Cardiovascular Surgery
Over 600 cardiac operations are performed each year at Children’s National. Repair of simple and complex cardiac disease in children and adults with congenital heart disease is carried out including complex neonatal repairs in the smallest infants. Dr. Richard Jonas, one of the most accomplished pediatric cardiac surgeons in the world, joined Children’s National in 2004 after leading the cardiac surgery program for many years at Children’s Hospital Boston. In addition to its active clinical program, the Division of Cardiovascular Surgery maintains an active research laboratory in the Children’s Research Institute.

Echocardiography
The Echocardiography Laboratory was the first digital pediatric echocardiography lab in the country and performs approximately 18,000 transthoracic echocardiograms, 2,000 fetal echocardiograms, and 500 transesophageal echocardiograms per year. Activities also include telemedicine, three-dimensional echocardiography, strain and strain-rate imaging, and dyssynchrony and cardiac resynchronization studies. The Echocardiography Laboratory includes a telemedicine terminal as well as a dedicated research station with state-of-the-art software to analyze ventricular mechanics. Children’s serves as a development site for industry leaders in echocardiography and telemedicine and frequently has access to new technology before it is released to the market.

Electrophysiology
A wide range of invasive and non-invasive electrophysiological procedures are performed at Children’s National. State-of-the-art equipment is used in our electrophysiology laboratory, including approximately 200 ablations and 50 pacemakers and implantable defibrillators. Noninvasive testing includes pacemaker interrogation, electrocardiograms, Holter monitoring, event recorders, tilt table testing, and signal-averaged electrocardiography. The electrophysiology team is comprised of four electrophysiologists and four dedicated nurses and nurse practitioners.
Fetal Heart Program
The Fetal Heart Program addresses the needs of the fetus with heart defects. Our program includes first trimester imaging and a specialized Fetal Delivery Service for has performed these evaluations as early as 12 weeks gestation. The Fetal Heart Program’s goal is to understand how heart defects affect fetal well-being in-utero and determine when and if intervention may be possible to best assure that the fetus is well taken care of for the duration of the pregnancy. Fetal cardiologists collaborate with maternal-fetal medicine specialists and obstetricians as well as cardiac intensivists, interventional cardiologists, electrophysiologists, and adult congenital cardiologists to provide care for the fetus and mother and to coordinate risk-adjusted deliveries. Fetal cardiologists also work with other specialists in the Division of Fetal Medicine to care for fetuses with extracardiac abnormalities and in multiple grant-funded research projects.

Heart and Kidney Unit
The Heart and Kidney Unit, a 26-bed acute care unit, cares for neonates, infants, children, and adults with congenital heart disease on the Cardiovascular Surgery and Cardiology Inpatient Services.

Heart Transplantation and Advanced Cardiac Therapies
The Heart Transplantation and Advanced Heart Failure Program at Children’s National is a very busy clinical service including inpatient acute and critical care, outpatient care, and pre- and post-transplant care. The team staffs numerous outpatient heart failure and transplant clinics as well as co-rounding with the HKU and CICU teams. Children’s National has continually provided medical and interventional pre- and post-transplant care for many years, and has performed nearly 50 transplants over the past five years. Children’s National has long been a national leader in ECMO and offers the full array of ventricular assist devices including the Berlin Heart and HeartMate II with a dedicated VAD manager and nurse practitioner.

Outpatient Clinics
Over 12,000 outpatient cardiology visits per year take place at Children’s National and its regional outpatient clinics. Specialty programs at Children’s National include:

- Single Ventricle Interstage Program
- Hyperlipidemia/Preventive Cardiology Clinic
- Heart Failure Clinic
- Pulmonary Hypertension Clinic
- Cardiac, Oncology, and Blood Disorders follow-up clinic
- Cardiac Neurodevelopmental Outcomes Program (CANDO)
- Inherited Arrhythmias

Our Single Ventricle Interstage Clinic utilizes telemedicine home monitoring and is staffed by a multi-disciplinary team of cardiologists, nurse practitioners, and a dedicated nutritionist and has resulted in one of the lowest interstage mortality rates in the country.

Washington Adult Congenital Heart Program
A large number of adolescents and adults with repaired or palliated congenital heart disease are followed by Children’s National’s specialized team of transitional and adult congenital cardiologists. This population includes older patients who underwent the Mustard or Senning operation for D-transposition of the great arteries, modified Fontan operation for single ventricle anatomy, and tetralogy of Fallot repair. Complex issues including arrhythmias, polycythemia, pregnancy, and psychosocial ramifications are addressed by the team. A joint clinic is also held with adult cardiologists from the Washington Hospital Center.
Recent Graduates
All graduating cardiology fellows have been successful at pursuing academic, private, or military careers after completing their fellowship, including both research and senior clinical fellowships at Children’s National and other prestigious institutions. The post-graduation experiences of our recent graduates are shown below.

<table>
<thead>
<tr>
<th>Fellow</th>
<th>Year</th>
<th>Post-Graduation Experience</th>
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<tbody>
<tr>
<td>Rohan Kumthekar</td>
<td>2019</td>
<td>Electrophysiology fellow at Children’s National</td>
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<tr>
<td>Deepa Mokshagundam</td>
<td>2019</td>
<td>Heart failure and transplant fellow at Washington University in St. Louis</td>
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<tr>
<td>Neeta Sethi</td>
<td>2019</td>
<td>Advanced imaging fellow at Children’s National</td>
</tr>
<tr>
<td>Meghan Zimmerman</td>
<td>2019</td>
<td>Faculty at Dartmouth-Hitchcock Children’s Hospital</td>
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<tr>
<td>Nimisha Aggarwal</td>
<td>2018</td>
<td>Parental leave</td>
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<tr>
<td>Ashish Doshi</td>
<td>2018</td>
<td>American Heart Association Early Career Development Grant at Johns Hopkins</td>
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<tr>
<td>Ian Hovis</td>
<td>2018</td>
<td>Faculty at Children’s National</td>
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<tr>
<td>Bryan Siegel</td>
<td>2018</td>
<td>Critical care fellowship at Children’s National</td>
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<tr>
<td>James Enos</td>
<td>2017</td>
<td>Faculty at Miami Children’s Hospital</td>
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<td>Jacob Hartz</td>
<td>2017</td>
<td>Preventive cardiology fellowship at Boston Children’s Hospital, faculty at Boston Children’s</td>
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<tr>
<td>Yue-Hin Loke</td>
<td>2017</td>
<td>Advanced Imaging fellowship at Children’s National, faculty at Children’s National</td>
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<tr>
<td>Lauren Tague</td>
<td>2017</td>
<td>Advanced Imaging fellowship at Children’s National, Faculty at Upstate Medical College</td>
</tr>
<tr>
<td>Brad Clark</td>
<td>2016</td>
<td>Electrophysiology fellowship at Children’s National, faculty at The Children’s Hospital at Montefiore</td>
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<td>Michael Cunningham</td>
<td>2016</td>
<td>Faculty at Naval Medical Center Portsmouth</td>
</tr>
<tr>
<td>Michelle Ploutz</td>
<td>2016</td>
<td>Heart failure and transplantation fellowship at Cincinnati Children’s, faculty at Phoenix Children’s Hospital</td>
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<tr>
<td>Joshua Hayman</td>
<td>2016</td>
<td>Faculty at University of Kentucky</td>
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<tr>
<td>Justin Georgekutty</td>
<td>2015</td>
<td>Adult congenital fellowship at Baylor/Texas Children’s; faculty at North Shore Cohen Children’s/LIJ</td>
</tr>
<tr>
<td>Elena Grant</td>
<td>2015</td>
<td>Interventional cardiology fellowship at Emory; faculty in California</td>
</tr>
<tr>
<td>Asha Nair</td>
<td>2015</td>
<td>Cardiac critical care fellowship at Boston Children’s; cardiac ICU faculty at Boston Children’s; cardiac ICU faculty at Stanford</td>
</tr>
<tr>
<td>Ann Punnoose</td>
<td>2015</td>
<td>Heart failure and transplantation fellowship at Lurie Children’s; heart failure/transplant faculty at University of Wisconsin</td>
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</tbody>
</table>

Benefits
Benefits for all Children’s National employees include health, dental and vision insurance; flexible spending accounts, life insurance, sick leave, disability insurance, and back-up dependent child and elder care. More information is available on our website. All cardiology fellows receive a laptop computer for use during their training in addition to a $1,500 educational stipend per year for books, conferences, and other educational materials. The 2019-2020 salary scale for fellows at Children’s National Medical Center is as follows:

FY19 Salary
PGY4 $75,742
PGY5 $80,027
PGY6 $84,485
PGY7 $89,289
PGY8 $94,353
CHILDREN’S NATIONAL HEART INSTITUTE
FACULTY ROSTER

Charles I. Berul, M.D.
Dr. Berul is Chief of the Division of Cardiology and Co-Director of the Children’s National Heart Institute. He was born in Washington, DC and was raised in the area. He earned his bachelor’s and master’s degrees in biology from Bucknell University and then received his doctorate of medicine from the University of Maryland. Dr. Berul completed his internship and residency in pediatrics at Yale, followed by specialty fellowship training in pediatric cardiology and electrophysiology at Children’s Hospital of Philadelphia. He was the director of the Pacemaker Program at Children’s Hospital Boston, Harvard Medical School until coming to Children’s National Medical Center in 2009. Dr. Berul is a professor of Pediatrics at George Washington University School of Medicine. Dr. Berul is a fellow of the Heart Rhythm Society, the American Academy of Pediatrics, the American College of Cardiology, the Society for Pediatric Research, and the American Heart Association’s Council on Cardiovascular Disease in the Young. Dr. Berul has over 150 publications in the field of pediatric cardiology. He is an invited speaker nationally and internationally and is an acknowledged expert in the area of pediatric cardiac electrophysiology.

Lowell H. Frank, M.D.
Dr. Frank joined the faculty of Children’s National in 2010 and is the Director of the Cardiology Fellowship Training Program. He received his B.A. with Distinction in All Subjects at Cornell University with dual majors in music and biochemistry and received his M.D. from the Weill Medical College of Cornell University. Dr. Frank completed his training in pediatrics at Cornell where he received the Department of Pediatrics Award for Teaching Excellence in his final year. He completed his fellowship training in pediatric cardiology here at Children’s National, where he twice received the David Lewis Award for Most Outstanding Fellow. He subsequently completed a senior fellowship in advanced cardiac imaging at Children’s National Medical Center. Dr. Frank has conducted research at the National Heart, Lung, and Blood Institute of the National Institutes of Health analyzing ventricular mechanics in models of congenital heart disease. His research interests include advanced echocardiographic measures of ventricular function, dyssynchrony, and echocardiographic resource utilization. He is the co-investigator on multiple grants investigating myocardial markers of sudden death in patients with refractory epilepsy. Dr. Frank leads the fellows’ pathology sessions and contributes to the weekly echo conferences and was awarded the 2016 Jodi I. Pike Award for Excellence in Teaching from the cardiology fellows. He participates in transthoracic, transesophageal, and three-dimensional echocardiography as well as inpatient and outpatient care, with a particular interest in medically complex patients and international adoption.

Christopher F. Spurney, M.D.
Dr. Spurney is the Associate Director of the Cardiology Fellowship Training Program. He joined the division of cardiology in July 2004 after completing his pediatric residency at Columbia and in pediatric cardiology fellowship at Children’s National Medical Center. Dr. Spurney obtained a B.A. in biology at Cornell University and completed his medical degree at New York Medical College. He was awarded the National Institute of Child Health and Human Development Child Health Research K12 Career Development Award in 2004. He performs research in the Children’s Research Institute at the Center for Genetic Medicine, investigating cardiomyopathy related to muscular dystrophies including non-invasive imaging of pre-clinical muscular dystrophy small animal models and novel non-invasive imaging and serum biomarkers of cardiomyopathy in Duchenne muscular dystrophy patients.
and molecular mechanisms of cardiomyopathy. He serves as the Associate Training Director for the AHA SFRN RHD Fellowship program. His clinical interests include inpatient cardiology, echocardiography, and outpatient care, where he runs a specialized muscular dystrophy clinic. Dr. Spurney has a long track record of successful research mentoring of medical students, residents, and cardiology fellows.

**Jeffrey A. Becker, M.D.**

Dr. Becker joined Children’s National in August 2008 and is director of Outpatient Services. He is the primary pediatric cardiology consultant at Holy Cross Hospital and sees patients throughout the DC region. He is board certified in general pediatrics and pediatric cardiology, a diplomate of the National Board of Medical Examiners, a fellow of the American Academy of Pediatrics and the American College of Cardiology, and a member of the North American Society for Cardiac Imaging. Dr. Becker received his doctorate of medicine from the George Washington University School of Medicine. He completed his residency in pediatrics at Walter Reed Army Medical Center, Washington, D.C. and his fellowship training in cardiology at Children’s National Medical Center. His primary interests include non-invasive cardiac imaging, outpatient cardiology, and quality management.

**John T. Berger, III, M.D.**

Dr. Berger is a cardiologist and cardiac intensivist. He received his undergraduate degree from the University of Virginia and his medical degree from Washington University School of Medicine in St. Louis. He then completed his training in pediatrics at Oregon Health & Science University followed by fellowships in cardiology and critical care medicine at Children’s National. In addition to his ICU practice, he serves as director of the Pulmonary Hypertension Program and is a member of the Heart Failure and Transplantation team. He has completed the Master Teacher program at George Washington University and has been an invited speaker regionally and nationally. Dr. Berger serves as the co-investigator in the Collaborative Pediatric Critical Care Research Network and is the site investigator and consortium cardiologist for the Therapeutic Hypothermia After Pediatric Cardiac Arrest trials. Dr. Berger received the 2018 Jodi I. Pike Award for Excellence in Teaching.

**Shivani Bhatt, M.D.**

Dr. Bhatt joins our team in the summer of 2018. She received her medical degree at the George Washington University School of Medicine and Health Sciences followed by residency, cardiology fellowship, and advanced imaging fellowship at the Children’s Hospital of Philadelphia. Dr. Bhatt’s clinical activities include echocardiography, fetal cardiology, and outpatient care.

**Kristin M. Burns, M.D.**

Dr. Burns joined the Children’s National Medical Center faculty in 2011. She received her bachelor’s degree from Wellesley College and her medical degree from the University of Massachusetts. Dr. Burns completed her pediatric residency and chief residency at Hasbro Children’s Hospital and Brown University and her pediatric cardiology fellowship at Children’s National Medical Center. She is also a medical officer in the Heart Development and Structural Diseases Branch in the Division of Cardiovascular Sciences at the National Heart, Lung, and Blood Institute (NHLBI), part of the NIH.
Sherrill Caprarola, M.D., MSHS
Dr. Caprarola joined the Cardiac ICU faculty in 2017 and is director of the senior clinical fellowship in cardiac critical care. After obtaining her medical degree from the Medical College of Wisconsin, she completed residency in medicine and pediatrics at the Medical College of Wisconsin. She completed a pediatric critical care medicine at Children’s National and earned a Master’s of Science in Health Sciences at George Washington University during her training. Dr. Caprarola completed a cardiology fellowship at Texas Children’s before returning to Washington to join our team.

Sarah B. Clauss, M.D.
Dr. Clauss joined our staff in September 2002 and leads the Single Ventricle Program. She received her bachelor’s degree from Cornell University and her medical degree from SUNY Buffalo. She completed her pediatric residency at Children’s Hospital of Pittsburgh and her pediatric cardiology fellowship at Johns Hopkins. Dr. Clauss’s interests include echocardiography, fetal cardiology, and dyslipidemias.

Jessica H. Colyer, M.D.
Dr. Colyer joined the Children’s National Medical Center faculty in 2011 and is the Medical Unit Director for the Heart and Kidney Unit as well as the Director of Inpatient Cardiology. She received her undergraduate degree from the College of the Holy Cross and her medical degree from Pennsylvania State University. She completed her pediatric residency, chief residency, and pediatric cardiology fellowship training here at Children’s National. Dr. Colyer participates in inpatient and outpatient care and has multiple quality improvement initiatives throughout the Heart Institute.

Russell R. Cross, M.D.
Dr. Cross is Director of the Cardiac MRI program. He is active in inpatient and outpatient care as well as in the echocardiography laboratory. He received his B.S. in electrical engineering from the University of Texas at Austin and his master of science in biomedical engineering and his doctorate of medicine from the University of Texas Southwestern. After pediatric residency training at the University of Texas Houston, he completed his cardiology fellowship training at Children’s National Medical Center. Dr. Cross was the director of pediatric cardiology inpatient services at Children’s National for nine years. His interests include information technology in medicine. He is active in the Joint Council on Congenital Heart Disease’s National Pediatric Cardiology Quality Improvement Collaborative.

Susan D. Cummings, M.D., M.P.H.
Dr. Cummings’ primary interests are in inpatient and outpatient care as well as echocardiography. Dr. Cummings joined the Children’s National staff in 1998. She received her bachelor’s degree from Duke University, her medical degree from Johns Hopkins University, and her pediatric residency and pediatric cardiology fellowship at Children’s Hospital Boston. She subsequently completed a senior fellowship in echocardiography at Children’s National Medical Center. Dr. Cummings’ focus includes education in transthoracic, transesophageal, and fetal echocardiography, and she was awarded the inaugural Jodi I. Pike Award for Excellence in Cardiology Fellow Education.
Shriprasad Deshpande, M.D.
Dr. Deshpande will be joining our team in the fall of 2018 as the Director of Heart Failure, Transplantation, and Advanced Cardiac Therapies. Dr. Deshpande obtained his medical degree from Lokmanya Tilak Medical College, in Mumbai, India, in 1998. He completed his residency in pediatrics at the University of Iowa Hospitals and Clinics in 2007. From 2007 to 2010, Dr. Deshpande was a fellow in pediatric cardiology, and an advanced fellow in pediatric cardiac intensive care from 2010 to 2011, at Children’s Healthcare of Atlanta. Dr. Deshpande’s roles include Cardiac ICU service and inpatient and outpatient transplant and heart failure service and clinics. His clinical interests include cardiac critical care, biomarkers in heart failure, and mechanical support.

Niti Dham, M.D.
Dr. Dham joined the Children’s National team in 2009. She completed her fellowship in pediatric cardiology and a senior fellowship in advanced cardiac imaging fellowship at Children’s National Medical Center. Prior to this, her cardiology fellowship included training at Columbia University and Tulane University. Her clinical interests include echocardiography, heart failure, and inpatient and outpatient care. Dr. Dham is the lead cardiologist involved in Children’s National’s Cardiology-Oncology-Blood Disorders Clinic, a multidisciplinary clinic focusing on the cardiac evaluation and management of children and young adults with a history of malignancies and hematologic diseases. Her research is focused on echocardiography in the evaluation of patients with sickle cell disease and heart failure as well as cardiac sequelae of chemotherapy.

J. Wesley Diddle, M.D.
Dr. Diddle is a member of our Cardiac Intensive Care Unit attending staff. He graduated from the University of Virginia and then subsequently medical school at the University of Tennessee. He completed his pediatric residency at Seattle Children’s Hospital, pediatric cardiology fellowship at Children’s Hospital of Boston, and critical care medicine fellowship at the Children’s Hospital of Pittsburgh. Dr. Diddle’s interests include studying the use of extracorporeal support in acute myocarditis, bedside hemodynamic monitoring, critical care echocardiography, and the effects of dexmedetomidine on low cardiac output syndrome.

Mary T. Donofrio, M.D.
Dr. Donofrio is director of the Fetal Heart Program, the Critical Care Delivery Program, the Advanced Cardiac Imaging Fellowship, and co-director of the Echocardiography Laboratory and Cardiac Neurodevelopmental Outcome Program. She graduated from Johns Hopkins University and received her M.D. from Mount Sinai School of Medicine. She trained in pediatrics at the New York Hospital – Cornell Medical Center followed by cardiology training at the Children’s Hospital of Philadelphia with advanced training in fetal echocardiography at Yale University. Her research has focused on fetal cardiovascular physiology and heart function, including studies of autoregulation of cerebral blood flow in fetuses with congenital heart disease and delivery room management strategies to improve the neurodevelopmental outcome of babies born with congenital heart disease. Dr. Donofrio has published over 80 peer reviewed papers, including the recent Scientific Statement: Diagnosis and Treatment of Fetal Cardiac Disease. She is the founding president of the Fetal Heart Society, a multidisciplinary multicenter collaborative research organization and is the vice-chair of finance for the Cardiac Neurodevelopmental Outcome Consortium.
Robin W. Doroshow, M.D.
Dr. Doroshow leads the Georgetown University pediatric cardiology program. Her primary interests include outpatient cardiology, echocardiography, and medical education. She has been in practice since 1978 after graduating from Harvard Medical School and completing residency and fellowship training at the University of Colorado and a research fellowship at Children’s Hospital Boston. She joined the staff at Children’s National in 2003 after spending 12 years in the University of California, Los Angeles. Dr. Doroshow is the faculty leader of the division’s journal club and is active in medical student, resident, and fellow education.

Tacy Downing, M.D.
Dr. Downing joined Children’s National in 2018 from Nicklaus Children’s Hospital in Miami. She completed medical school and an Internal Medicine-Pediatrics residency at Duke and her cardiology fellowship and advanced fellowship training in both adult congenital heart disease and interventional cardiology at the Children’s Hospital of Philadelphia. She is Board Certified in Internal Medicine, Pediatrics, and Pediatric Cardiology. Dr. Downing balances her time between interventional cardiology and adult congenital heart disease clinics. Her research interests include single ventricle physiology and outcomes of stent implantation in infants.

Craig Futterman, M.D.
Dr. Futterman is an attending physician in the Cardiac Intensive Care Unit. He completed residency training in both pediatrics and anesthesiology at Akron Children’s Hospital and a combined fellowship program and anesthesia and pediatric critical care medicine at Children’s Hospital Boston. Dr. Futterman devotes considerable time to information technology and medical informatics and is a member of the Bear Institute, our innovative clinical information technology team.

Ashraf S. Harahsheh, M.D.
Dr. Harahsheh joined Children’s National in September 2008 after completing his residency and fellowship training at the Children’s Hospital of Michigan. He received his doctorate of medicine from the University of Jordan-College of Medicine, Amman, Jordan. Dr. Harahsheh is director of resident education in our division and is active in inpatient and outpatient care as well in the preventive cardiology program with a focus on hyperlipidemia. He is active in the Joint Council on Congenital Heart Disease’s National Pediatric Cardiology Quality Improvement Collaborative.

Ian Hovis, M.D.
Dr. Hovis joined our team in the summer of 2018 after completing his cardiology fellowship at Children’s National. Dr. Hovis established a track record of success here in Washington, making two trips to Uganda for rheumatic heart disease research and achieving recognition for excellence in medical student education. Dr. Hovis’ practice focuses on outpatient care, and his academic interests including medical student, resident, and fellow education.
Seiji Ito, M.D.
Dr. Ito joined Children’s National in 2015. He completed his medical degree at the Ehime University School of Medicine in Japan followed by residency in medicine and pediatrics at the University of Missouri-Kansas City. He completed his cardiology fellowship at New York University and a fellowship in Adult Congenital Heart Disease at the University of Washington in Seattle. In addition to his core role as a part of the Washington Adult Congenital Heart Program, Dr. Ito is a part of our cardiac MRI team. Dr. Ito was awarded the 2017 Jodi I. Pike Award for Excellence in Teaching from the cardiology fellows.

Anitha S. John, M.D., Ph.D.
Dr. John joined Children’s National in 2011 and is Director of the Washington Adult Congenital Heart Program. After completing an accelerated undergraduate degree from Villanova University in 1994, she obtained a Ph.D. in the molecular pathobiology program in 1999 and completed her medical degree in 2001 from the Drexel University Medical School. She completed a combined internal medicine-pediatrics residency program at Brown University, pediatric cardiology fellowship at Children’s Hospital of Philadelphia, and a senior fellowship in adult congenital heart disease at the Mayo Clinic. Dr. John practices at Children’s National and participates in the Echocardiography Laboratory at the Washington Hospital Center. Her recent research has focused on liver dysfunction in patients with the Fontan palliation for single ventricles.

Jonathan Kaltman, M.D.
Dr. Kaltman joined Children’s National in 2007 after serving on faculty as the Children’s Hospital of Philadelphia, where he completed his pediatric internship and residency, his cardiology fellowship, and his subspecialty training in electrophysiology. Dr. Kaltman serves as a Branch Chief in the Heart Development and Structural Diseases Branch in the Division of Cardiovascular Sciences at the National Heart, Lung, and Blood Institute (NHLBI), of the NIH. In this role, he is responsible for developing new research initiatives and managing basic and clinical research grants in the multiple areas of pediatric cardiology-related disease states. Dr. Kaltman provides leadership for the Pediatric Cardiac Genomics Consortium, a multi-center translational research group investigating the association of genetic variation with congenital heart disease diagnosis and outcome. He also helps oversee the Pediatric Heart Network, a multi-center clinical research network conducting studies in children with congenital heart disease.

Joshua P. Kanter, M.D.
Dr. Kanter is director of the Cardiac Catheterization Laboratory at Children’s National. He received his medical degree and pediatric training from the State University of New York Health Science Center at Syracuse and completed fellowship training in pediatric cardiology and interventional pediatric cardiology at the New York Presbyterian Hospital, Columbia University Medical Center. Dr. Kanter specializes in diagnostic and interventional pediatric cardiac catheterization for the treatment of congenital heart disease. He has extensive experience implanting the Melody® Transcatheter Pulmonary Valve, and is an expert in the device closure of atrial septal defects, ventricular septal defects, and patent ductus arteriosus. He is an investigator in a number of national multi-center research studies to examine new devices and to track clinical outcomes. He serves on several national committees including the NCDR IMPACT™ Registry Implementation Group and the American College of Cardiology Annual Scientific Session Program Committee.
Sairah Khan, M.D.
Dr. Khan joined Children’s National in 2016 as part of the Heart Failure and Transplant team. A native of northern Virginia, she received her undergraduate degree in biology and psychology from the University of Rochester, where she subsequently completed medical school. She completed her Pediatrics residency at the University of North Carolina followed by a Cardiology fellowship at Nationwide Children's in Columbus, Ohio. Dr. Khan did an advanced fellowship in Pediatric Heart Failure, Cardiomyopathy, and Transplant at Cincinnati Children's Hospital. Dr. Khan's research interests include heart failure biomarkers, transplant clinical immunology, and quality-of-life measurements in cardiomyopathies and transplant patients.

Darren Klugman, M.D., M.S.
Dr. Klugman joined the Children’s National faculty in 2010 and is the Medical Director of the Cardiac Intensive Care Unit as well as the Director of Quality and Safety for the Heart Institute. He completed his undergraduate studies at Emory University and received his Masters of Science at Drexel University. He received his medical degree at the George Washington University School of Medicine and subsequently completed his pediatric residency and a joint 5-year program in Cardiology and Critical Care Medicine at Children’s National. Dr. Klugman coordinates our participation in the Pediatric Cardiac Critical Care Consortium and is the most recent program chair for the Pediatric Cardiac Intensive Care Society’s Annual Meeting.

Anita N. Krishnan, M.D.
Dr. Krishnan joined the Division of Cardiology in October 2009 and is our Associate Director of the Echocardiography Laboratory. She received her undergraduate degree from the Massachusetts Institute of Technology, where she studied chemical engineering. She attended Northwestern University for medical school and subsequently completed her pediatric residency, pediatric cardiology fellowship, and advanced imaging fellowship at Children’s National. Her research interests investigation of novel techniques for fetal ECG monitoring. Her clinical practice focuses on fetal cardiology, transthoracic and transesophageal echocardiography, and inpatient and outpatient care.

Linda Leatherbury, M.D.
Dr. Leatherbury returned to Children’s National Medical Center in October 2001 after 16 years on the faculty at the Medical College of Georgia. She is board certified in pediatric cardiology. Dr. Leatherbury completed her residency and fellowship at Children’s National and was recognized for excellence in teaching during her time here. Her primary interests are inpatient and outpatient care, clinical and basic science education, and basic science research. Dr. Leatherbury has mentored numerous undergraduates, post-doctoral fellows, and cardiology fellows in the Laboratory of Developmental Biology at the NIH and is active in research investigating genetic mutations in mouse models of congenital heart disease.
Yue-Hin Loke, M.D.
Dr. Loke joined the Children’s National Medical Center faculty in 2018. He received his bachelor's degree from University of Maryland and his medical degree from the Indiana University School of Medicine. Dr. Loke completed his pediatric residency, pediatric cardiology fellowship, and advanced cardiac imaging fellowship at Children’s National Medical Center. Dr. Loke is an early adopter of new imaging technology, and his interests include echocardiography, cardiac MRI, 3D printing, and computational fluid dynamics in congenital heart disease. His research interests have strengthened the relationship with George Washington Department of Bioengineering. Dr. Loke runs our weekly Echo Case Conference and is the 2018 recipient of the Jodi I. Pike Award for Excellence in Teaching.

Alejandro Lopez-Magallon, M.D.
Dr. Lopez-Magallon joined Children’s National in 2017. He received his medical degree in 1986 from the Escuela Medico Militar followed by internship and residency at Esceula Militar de Graduados de Sanidad. He subsequently completed fellowship training at the Massachusetts General Hospital and Boston Children's Hospital. His interests include cardiac critical care and telemedicine, and he has worked with cardiac critical care units in Columbia to improve care and reduce mortality. His clinical responsibilities include cardiac ICU practice, working with our telemedicine partners, and reading in our echo lab.

Gerard R. Martin, M.D.
Dr. Martin has been in practice at Children’s National Medical Center since 1986. He is the C. Richard Beyda Professor of Cardiology and formerly served as Co-Director of the Children’s National Heart Institute. He has previously served as Chief of the Division of Cardiology, director of the Echocardiography Laboratory, and director of the Cardiology Fellowship Training Program. He earned his bachelor’s degree in biology from Syracuse University and his M.D. from SUNY-Upstate Medical Center. Dr. Martin completed his residency in pediatrics at Rhode Island Hospital in Providence. Subsequently, he completed his cardiology fellowship at the University of California, San Francisco. He was the inaugural chair of the American College of Cardiology’s Adult Congenital and Pediatric Cardiology Section. Dr. Martin has also served on the American Board of Pediatrics Sub-Board in Pediatric Cardiology and as a member of the National Heart, Lung, and Blood Institute’s Cardiology Data and Safety Monitoring Board. Dr. Martin has more than 85 publications in the field of pediatric cardiology. He is an invited speaker nationally and internationally and is an acknowledged expert in the area of pediatric echocardiography. Dr. Martin is a national leader in the role of pulse oximetry in screening for congenital heart disease and has presented this work at many regional and national meetings as well as to state legislatures.

Michele Mietus-Snyder, M.D.
Dr. Mietus-Snyder is co-director of the Obesity Institute after practicing in the UCSF Departments of Pediatric Medicine and Physiological Nursing. She received her undergraduate and M.D. degrees from the University of California, San Diego and did her pediatric residency and cardiology fellowship training at Children's Hospital Boston. Her interest in the molecular pathways responsible for early preclinical atherogenesis led her to pursue basic science research in lipoprotein gene regulation at Harvard and at the Gladstone Institute for Cardiovascular Disease Research. Her studies of redox-sensitive genes important in early heart disease impressed upon her how many cardiovascular risk factors function via common metabolic pathways that promote vascular oxidative stress, including dyslipidemia, unhealthy diet, sedentary lifestyle, hypertension, and psychological stress. Her clinical practice focuses on preventive cardiology.
Jeffrey P. Moak, M.D.
Dr. Moak is director of Electrophysiology and Pacing at Children’s National. Dr. Moak has been in practice for over 20 years, joining the staff here in 1992 after serving as an attending at Texas Children’s Hospital. He received his training in pediatric cardiology at the Columbia University College of Physicians followed by a fellowship in cellular electrophysiology at the same institution. He is board certified in pediatric cardiology and a fellow of the American Academy of Pediatrics and the American College of Cardiology. Dr. Moak’s primary interests include sudden cardiac death, neurally mediated cardiac syncope, and pacemakers and cardiac function. His clinical practice includes inpatient and outpatient electrophysiology as well as the full spectrum of interventional electrophysiologic procedures.

Ricardo Munoz, M.D.
Dr. Ricardo Munoz joined Children’s National in 2018 as the Chief of the Division of Cardiac Intensive Care, Co-Director of the Children’s National Heart Institute, and Executive Director of Telemedicine Services. Dr. Munoz is a highly accomplished pediatric cardiologist and critical care physician who has led major programs in cardiac intensive care and has distinguished himself as an international leader in telehealth. He was the Chief, Cardiac Intensive Care Division at the Children’s Hospital of Pittsburgh where he also served as Medical Director for Global Business and Telemedicine and Director of International Affairs. During his fifteen-year tenure, Dr. Munoz established the cardiac intensive care unit and co-led the Heart Center in a multi-disciplinary effort to achieve some of the nation's very best outcomes. Dr. Munoz has also developed multiple telemedicine programs between the Children’s Hospital of Pittsburgh and other intensive care units, cancer programs, and pediatric services in the US and abroad. He is a fellow of the American Academy of Pediatrics, the American College of Critical Care Medicine, and the American College of Cardiology. He is the primary editor and co-author of multiple textbooks and award-winning handbooks in pediatric cardiac intensive care, including Spanish language editions.

Jai K. Nahar, M.D.
Dr. Nahar joined the division of cardiology in July 2006 after completing his training at Children’s National Medical Center. After his pediatric postgraduate training in India, he finished his pediatric residency at Sinai Hospital of Baltimore. Prior to joining the cardiology fellowship, Dr. Nahar worked as a primary care pediatrician in Hagerstown, MD. His primary focus is outpatient cardiology.

Laura J. Olivieri, M.D.
Dr. Olivieri splits her time between the Division of Cardiology and the Sheikh Zayed Institute for Pediatric Surgical Innovation. She received her undergraduate degree at Worcester Polytechnic institute and her medical degree at the University of Chicago. Following her pediatric residency and chief residency at Hasbro Children’s Hospital and Brown University, she completed her pediatric cardiology fellowship at Children’s National and a senior fellowship in advanced cardiac imaging and cardiac MRI at Children’s National and the NIH. Dr. Olivieri’s research has included computational models of flow dynamics and presently focuses on using MRI and echocardiographic in 3D printing of heart models. Her clinical practice includes inpatient and outpatient care, echocardiography, and cardiac MRI. Dr. Olivieri is a sought-after national speaker on cardiac MRI topics with multiple NIH grants and has a proven track record of success in mentoring multiple fellows in their scholarly activities. Dr. Olivieri was awarded the 2017 Jodi I. Pike Award for Excellence in Teaching from the cardiology fellows.
Jason Patregnani, M.D.
Dr. Patregnani joined the Cardiac Intensive Care Unit attending staff in 2016. He completed his undergraduate degree at Boston College, his medical degree at Albany Medical College, and his pediatric residency training at Connecticut Children’s Medical Center. Dr. Patregnani subsequently trained in cardiology and then critical care at Children’s National. He has received an NIH K award for his work investigating aspirin resistance and the use of thromboelastograms in congenital heart disease.

Gail D. Pearson, M.D., Sc.D.
Dr. Pearson is the Director of the Office of Clinical Research, and the Associate Director of the Division of Cardiovascular Sciences at the National Heart, Lung, and Blood Institute, NIH. In this capacity, she leads the multi-center Pediatric Heart Network and oversees multiple clinical research protocols. Other responsibilities include developing a clinical trials dashboard, clinical research policy, and standard operating procedures for NHLBI, consultation to the FDA and other NIH Institutes on topics pertaining to clinical research and pediatric cardiology, and participation in national conferences on aspects of clinical research. Dr. Pearson is a part-time Children’s National faculty member, focusing on outpatient cardiology, echocardiography, and training the cardiology fellows. She is board-certified in pediatric cardiology, and is a fellow of the American Academy of Pediatrics, the American College of Cardiology, and the American Heart Association. She serves as the faculty mentor for a core fellows’ conference focused on clinical research. Dr. Pearson was honored as the 2015 recipient of the American Heart Association’s Lifetime Achievement Award.

Robin Puente, M.D.
Dr. Puente joined our cardiac intensive care unit team in 2018 after practicing at Children’s Medical Center Dallas/University of Texas Southwest. Dr. Puente completed medical school at Washington University of St. Louis School of Medicine, where she also completed her pediatric residency. She then completed her pediatric critical care fellowship at University of Texas Southwestern, where she also served as chief fellow. She remained in Dallas for her pediatric cardiology fellowship. Her clinical interests include myocardial dysfunction and recovery in pediatric patients with heart failure and she conducts basic science research at the NIH.

Craig A. Sable, M.D.
Dr. Sable is the Associate Chief of the Division of Cardiology and Director of the Echocardiography Laboratory. He received his undergraduate education at Northwestern University, his medical education at the University of Chicago, and his pediatric residency and pediatric cardiology fellowship training at Children’s National. He is chairman of the Sub-Board of Pediatric Cardiology of the American Academy of Pediatrics, past chairman of the Cardiovascular Disease in the Young section of the American Heart Association, and is an editor of the journal Pediatric Cardiology. Dr. Sable’s primary interests include telemedicine, advanced echocardiography, and rheumatic heart disease. He has a strong interest in international medicine, having lead over a twenty medical missions to Africa to establish a sustainable congenital heart program in Uganda and is co-investigator on the AHA Strategically Focused Research Network RHD grant. Dr. Sable directs the fellows’ weekly echocardiography conference.
Elizabeth Sherwin, M.D.
Dr. Sherwin is an interventional electrophysiologist with a special interest in inherited arrhythmias. Prior to joining Children’s National, Dr. Sherwin was an attending pediatric electrophysiologist at British Columbia Children's Hospital in Vancouver, Canada, where she was the Director of Electrophysiology. Originally from Virginia, Dr. Sherwin received her medical degree from Medical College of Virginia and completed the combined Boston Children’s and Boston University pediatrics residency. Dr. Sherwin then completed a pediatric cardiology fellowship at Boston Children’s as well as an advanced electrophysiology fellowship. Dr. Sherwin was awarded the 2016 Jodi I. Pike Award for Excellence in Teaching from the cardiology fellows.

Gilbert Wernovsky, M.D.
Dr. Wernovsky is an internationally renowned pediatric cardiologist and cardiac intensivist. As a senior consultant in cardiology, he serves as an attending physician in the Cardiac ICU and on our inpatient cardiology service. Dr. Wernovsky's clinical interests include the inpatient care of infants with critical congenital heart disease (CHD) and mechanical support of the failing circulation. For the past 30 years, he has been particularly interested in the long-term functional outcomes following surgery for complex CHD, particularly transposition of the great arteries, tetralogy of Fallot and single ventricle defects such as hypoplastic left heart syndrome. His goal is to identify modifiable factors in the care of children with CHD to improve overall outcomes, longevity, school performance, and quality of life. He is also a founding member of the Pediatric Cardiac Intensive Care Society and International Society for Pediatric Mechanical Cardiopulmonary Support, and was the Co-Chair of the Perioperative Working Group of the Pediatric Heart Network, NIH. He is the incoming co-chair of the 2021 World Congress of Pediatric Cardiology and Cardiac Surgery, to be held in Washington, DC.

David L. Wessel, M.D.
Dr. Wessel joined Children’s National in July 2007 and now serves as Chief Medical Officer for Hospital Services. Dr. Wessel was educated and trained at Oxford, Yale and Harvard and is board certified in anesthesiology, pediatrics, pediatric cardiology, and pediatric critical care medicine. He is regarded by many as one of the fathers of pediatric cardiac critical care. He was the founding president of the Pediatric Cardiac Intensive Care Society, an international society which honored him with its 2004 award for contributions to improving children’s heart health. While in Boston, he designed a training program for pediatric cardiac intensive care and trained numerous fellows and staff who are now leaders in that field throughout the country.

Gregory Yurasek, M.D.
Dr. Yurasek joined our Cardiac Intensive Care Unit team in 2015. He is a graduate of the College of the Holy Cross and the Columbia University College of Physicians and Surgeons. Subsequently, Dr. Yurasek completed his pediatric residency and cardiology fellowship at Children’s Hospital of Boston. Subsequently, Dr. Yurasek completed a pediatric critical care fellowship at Massachusetts General Hospital. He has been recognized for his teaching throughout his training and has won numerous awards, including the Fellow Teacher of the Year while at Massachusetts General Hospital. He runs our simulation program in the cardiac intensive care unit and helps coordinate the orientation of our fellows to the CICU.
**Division of Cardiovascular Surgery**

**Faculty Roster**

**Richard A. Jonas, M.D.**
Dr. Jonas is the Chief of Cardiovascular Surgery at Children’s National Medical Center and Co-Director of the Children’s National Heart Institute. He joined our staff in July 2004 after spending 20 years at The Children’s Hospital Boston, where he was Cardiovascular Surgeon-in-Chief for 10 years. He completed his post-doctoral training in Melbourne, Australia, Auckland, New Zealand, and Boston. His surgical skills in management of all aspects of congenital heart disease are world renowned. He is an international leader in pediatric cardiovascular surgery, caring for patients from all over the world. He has had leadership roles in several professional societies including the Congenital Heart Surgeons Society and the American Association for Thoracic Surgery. He is an author on over 250 peer reviewed manuscripts and 30 book chapters. He has authored 5 textbooks including the “Comprehensive Surgical Management of Congenital Heart Disease.” He is principle or co-investigator on 5 active NIH funded grants. His more recent research has focused on the study of support techniques during cardiac surgery to maximize intellectual development and minimize neurological injury.

**Syed Murfad Peer, M.D.**
After completing his congenital heart surgery fellowship at Children’s National Heart Institute, Dr. Peer was recruited as junior faculty at the University of Michigan (Mott Children’s Hospital and Frankel Cardiovascular Center). At Michigan, Dr. Peer further specialized in heart transplantation and advanced surgical therapy of heart failure (ECMO and ventricular assist devices). He has the unique distinction of being one of the few pediatric heart surgeons in the country with advanced training in heart transplantation and ventricular assist device therapy. Before coming back to Children’s National, Dr. Peer was faculty at the University of Minnesota, Masonic Children’s Hospital in Minneapolis. Dr. Peer has published extensively in the field of congenital heart surgery and has made several presentations at national and international meetings. He has a research interest in pediatric mechanical circulatory support, especially mechanical support of single ventricle circulation. Dr. Peer is currently working on a mechanical circulatory support strategy for the failing Fontan circulation.

**Karthik Ramakrishnan, M.D.**
After completing his fellowship in congenital cardiac surgery at two major centers in Australia, Dr. Ramakrishnan joined as a fellow at Children’s National in July 2014. After completing two years of fellowship, Dr. Ramakrishnan was promoted and joined the staff at Children’s National in October 2016. Dr. Ramakrishnan has extensive experience in managing children with congenital heart disease. Apart from routine open heart procedures in children, he has a special expertise in ECMO procedures and PDA ligation in extremely premature babies. He also has a keen interest in studying clinical outcomes after heart surgery in children. His research projects have included analysis of the UNOS database and the PHIS database, and his research has resulted in numerous presentations at national and international meetings. Dr. Ramakrishnan also is currently the principal investigator at Children’s National for the Pediatric Heart Transplant Study (PHTS) group and the study coordinator for the Congenital Heart Surgeon’s’ Society (CHSS) studies. Dr. Ramakrishnan also is an educator; he loves teaching and views his regular interaction with the staff in the cardiac intensive care unit (ICU) as a two-way learning experience that ultimately results in better care for the patients.
Pranava Sinha, M.D.
Dr. Sinha joined Children’s National Heart Institute at Children’s National Medical Center in September 2008. He received his Bachelor of Medicine and Surgery from Grant Medical College, University of Mumbai, India. After his cardiothoracic residency there he further trained in the specialty at St. Thomas’s Hospital in London, UK, and at Boston Medical Center and Boston University, followed by Congenital Cardiac Surgery fellowship at Children’s National Medical Center, Washington, DC. He is an Associate Professor in Surgery and Pediatrics at the George Washington University School of Medicine. His research interests include improving the outcomes of Single Ventricle Circulation including mechanical circulatory support strategies and device development.

Can Yerebakan, M.D.
Dr. Yerebakan earned his medical degree from Albert-Ludwigs University in Freiburg, Germany. He completed his residency in cardiac surgery at two premier centers in Germany followed by a fellowship in pediatric cardiac surgery at Children’s National. Dr. Yerebakan specializes in hybrid treatment of hypoplastic left heart syndrome (HLHS) and he is internationally recognized for his contributions to the field of congenital cardiac surgery. Dr. Yerebakan returned to Children’s National in 2017 from the prestigious Pediatric Heart Center Giessen in Germany, where he served as cardiac surgeon and associate professor of Cardiac Surgery at the Justus-Liebig-University. He has authored more than 70 peer-reviewed scientific papers in three different languages and has given numerous presentations on congenital cardiac surgery around the world. In addition to several awards for his research, Dr. Yerebakan was recognized by the European Association of Cardiothoracic Surgery with a prestigious award for his work on experimental animal models for congenital heart surgery in 2009. His research interests also include alternative treatment for dilated cardiomyopathy in children.

Cardiac Anesthesia Attending Staff

Nina Deutsch, M.D., Director
Anna Brown, M.D.
Richard Kaplan, M.D.
Andy Matisoff, M.D.
Karen Thomson, M.D.
Chinwe Unegbu, M.D.
Andrew Waberski, M.D.

Advanced Practice Cardiac Nurses and Nurse Practitioners

Nancy Klein, Adult Congenital Heart Disease
Rachel Steury, Adult Congenital Heart Disease
Ileen Cronin, Cardiac Cath Lab
Melissa Jones, Cardiac Intensive Care Unit
Christine Riley, Cardiac Intensive Care Unit
Lauren Daniels, Cardiac Intensive Care Unit
Summer Langston, Cardiac Intensive Care Unit
Caroline Burke, Cardiovascular Surgery
Charlette Dampier, Cardiovascular Surgery
Carla Rothgery, Cardiovascular Surgery
Cary McMahon, Cardiovascular Surgery
Diane Morrison, Cardiovascular Surgery
Elizabeth Moynihan, Cardiovascular Surgery
Lisa Ring, Cardiovascular Surgery
Andrea Stough, Cardiovascular Surgery
Sheila Bostelman, Pulmonary Hypertension
Vicki Freedenberg, Electrophysiology
Beth Jarosz, Electrophysiology
Carolyn Ramwell, Electrophysiology
Monica Patregnani, Heart Transplantation
Laura Norris, Heart Failure and Transplant
Colleen Iler, Heart Failure and Transplant
Kathleen Kalinger, Single Ventricle Program
Robin Fabian, Syncope
### 2019 - 2020 Children’s National Cardiology Fellows

#### Third year fellows

<table>
<thead>
<tr>
<th>Name</th>
<th>Residency</th>
<th>Medical School</th>
<th>College</th>
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<tbody>
<tr>
<td>Jason Mandell, M.D.</td>
<td>Residency Hasbro Children’s Hospital - Brown University</td>
<td>NY Medical College</td>
<td>Cornell University</td>
</tr>
<tr>
<td>Jennifer Romanowicz, M.D.</td>
<td>Residency Children’s National Medical Center</td>
<td>NY Medical College</td>
<td>Amherst College</td>
</tr>
<tr>
<td>Sonia Voleti, M.D</td>
<td>Residency New York Presbyterian Hospital - Weill Cornell Medical College</td>
<td>Drexel University School of Medicine</td>
<td>Drexel University</td>
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<tbody>
<tr>
<td>Valerie Curren, MBBCh</td>
<td>Residency Children’s Hospital Pittsburgh</td>
<td>Royal College of Surgeons – Ireland</td>
<td>Colgate University</td>
</tr>
<tr>
<td>Jennifer Klein, M.D.</td>
<td>Residency Children’s National Medical Center</td>
<td>Emory University School of Medicine</td>
<td>Washington University in St. Louis</td>
</tr>
<tr>
<td>Bradford Ralston, M.D.</td>
<td>Residency Children’s Medical Center/UT Southwestern Medical Center</td>
<td>Medical University of South Carolina</td>
<td>Vanderbilt University</td>
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<tr>
<td>Jennifer Schramm, M.D.</td>
<td>Residency Washington University in St. Louis – St. Louis Children’s</td>
<td>University of Wisconsin - School of Medicine</td>
<td>University of Wisconsin – Madison</td>
</tr>
<tr>
<td>Michelle Udine, M.D.</td>
<td>Residency University of Alabama Birmingham</td>
<td>Medical School Robert Wood Johnson Medical School</td>
<td>George Washington University</td>
</tr>
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#### First year fellows

| Name                  | Fellowship Critical Care Medicine, Children’s National Children’s Hospital of Orange County |
|-----------------------|-----------------------------------------|-------------------------------------------------|
| Bonnie Brooks, M.D.   | Residency                               | Medical University of South Carolina Duke University |
| Marie Carillo, M.D.   | Residency Hasbro Children’s Hospital - Brown University Boston University William and Mary |
| Jonathan Nyce, M.D.   | Residency Icahn School of Medicine – Mount Sinai Tufts University Trinity College |
| Bryanna Schwartz, M.D., MPH | Residency Childrens National Health System | Medical School University of Miami University of North Carolina – Chapel Hill |
Please let us know if we can answer any questions about life in DC and at Children’s National!

<table>
<thead>
<tr>
<th>Name</th>
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</tr>
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<tbody>
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