The Path To Accreditation
Adult Congenital Heart Disease

This February, Washington University’s Cardiovascular Division is anticipating a site visit from the Adult Congenital Heart Association (ACHA) as the next step in becoming one of the organization’s first accredited ACHD Comprehensive Care Centers in the country.

“I would like our center to be the first accredited ACHD center in the Midwest,” says Joseph Billadello, MD, director of WU’s ACHD program (cardiology fellow ‘81-’85). “We have to prove we have the expertise and infrastructure in place as well as a multidisciplinary team available 24/7 to care for these patients.”

The ACHA officially launched the ACHD accreditation program last July. Applications were due by October 31, 2016. The program has been part of the ACHA’s strategic plan for the past several years, in part because CHD is the most common birth defect. Because of advancements in medicine, there are more adults living with CHD than children, yet the ACHA estimates that only 10% of adult patients seek care and regular follow-up.

“We do handle about 1,600 clinical visits annually in our ACHD clinic, making us one of the largest in the country,” says Billadello. “We also are engaged in multiple clinical research projects and have a database of 3,000 ACH patients. It’s also important to note that we work well with the pediatric cardiologists at St. Louis Children’s Hospital who care for children with this disease and are collaborating with them to provide long-term care for adults.”

Billadello is leading the ACHD program at a time when there is a sea of change.

The program, founded in 1992 by Philip Ludbrook, MD, who retired as director last year, also is working to become certified by the American Board of Internal Medicine as an official ACHD fellowship training program. The American Board of Internal Medicine started a certification program in October 2015, shortly after it made ACHD a board-certified cardiology subspecialty.

WU has offered a clinical pathway in CHD for more than two decades.

“This truly will make our institution a ‘full service’ training program in all cardiology disciplines,” says Philip Barger, MD, who leads the effort here to establish a certified training program.

Once approved, the division initially will fund one fellowship slot. More funding would enable the division to add an ACHD research fellowship.

“Another exciting research endeavor is a collaboration with pediatric cardiologist Anwar Shafrkat, MD, to use 3-D printing technology for complex ACHD cases,” says Billadello. “We are working with colleagues in the departments of radiology.

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It was wonderful to see many of you in New Orleans in November at both the AHA Scientific Sessions and in our satellite symposium focused on sudden cardiac death (SCA). SCA is still the leading cause of death among adults over the age of 40 and we had many stimulating discussions at the symposium about the latest advances to evaluate and treat SCA.

As you read in this newsletter, we are busy preparing for a site visit for accreditation as an Adult Congenital Heart Disease Comprehensive Care Center. Because of the depth and breadth of our program, we are optimistic that we will be one of the first such centers to be accredited in the country. Our 5th Annual Cardiovascular Research Day, which featured Dr. Christine Sediman as the 4th annual Sobel lecturer, was again a huge success, with undergraduate and postdoctoral students and fellows having opportunities to showcase their research efforts.

We are proud to announce that two of our Washington University colleagues were instrumental in writing the new national guidelines for the AHA and ACC focused on sports/activity levels for competitive athletes who have specific heart conditions. We also have several academic appointments to announce proudly, including the promotion of Dr. Andrew Kates, MD, director of our fellowship training program, to Professor of Medicine, and Dr. Kory Lavine’s promotion to Assistant Professor of Medicine in the Center for Cardiovascular Research. They already have contributed much to our division and to the field of cardiology, both in terms of education and research. Finally, we sadly say good-bye to Dr. Sam Wickline, who is leaving us after three decades at Wash U to embark on a new challenge as head of the Health Heart Institute in Tampa. We know he will keep in touch with many of us — and share a fishing story or two!
Cardiology, with its myriad career pathways and subspecialties, requires mentorship. In our fellowship program, we feel the more opportunities that are available for mentorship, the greater the likelihood of a successful mentor–mentee relationship. We also realize that mentorship comes in many forms—as a lifelong relationship with commitment to research, through assisting fellows as they consider their developing careers and by understanding the unique challenges that certain fellows face.

To address mentorship as best we can, we have three different yet equally important mentorship programs. The Research Mentoring Committee, led by Mike Rich, is comprised of several senior faculty members. This committee works directly with fellows, their research mentors and other key faculty to review and guide fellow-initiated investigational studies. The Career Mentor Program also led by Mike Rich, places incoming fellows with a faculty member with similar career interest. This provides the basis for insights into career planning throughout training and guidance as they consider careers beyond fellowship. The third program, known as IMPACT (Initiative for Mentoring, Promoting Networking and Advocacy for Cardiology Trainees) is led by Sharon Cresci. This program provides female fellows the opportunity to connect with and be mentored by current faculty as well as network with past alumni.

These programs have been very well received by our fellows. Of course, as with most endeavors into mentorship, time will be the true judge of our success. I encourage you to visit the Wash U Cardiology Fellowship website to learn more about the program, our fellows, mentorship opportunities and more.

**Alumni Update**

**Larry Fields, MD, MBA**

Cardiovascular Fellow (’83–’87)

Currently: Member of the National Advocacy Committee of the Carrie Steele-Pitts Home in Atlanta. Fields was Chief Health Officer and Director of the Health Department for the City of St. Louis before founding and leading Saint Louis ConnectCare, a system of community-based clinics and health centers. He subsequently joined BJC HealthCare and helped to create the St. Louis Regional Health Commission. He also led a WU/BJC initiative to coordinate and improve the quality of cardiovascular clinical services system-wide. He was a senior advisor to the U.S. Dept. of Health and Human Services, co-authoring its report on the burden of hypertension in America. He later served as director or senior director for Medco Health Solutions, Pfizer and Janssen. He retired from Janssen last year as Sr. Director of Medical & Scientific Affairs.

**Favorite Leisure Activities:** Spending time with family and friends. Hobbies include impressionist art, amateur photography, computers, jazz and classical music.

**Favorite Fellowship Memories:** I am grateful for the opportunity to have served as an intern, resident, fellow and faculty member at Wash U. My fondest memories are of the brilliant faculty and private practice clinicians that taught and mentored in ways that seemed effortless but that consistently transformed us into some of the best-trained specialists in the country. The collegial atmosphere and camaraderie among fellows was energizing and the world-class ecosystem drove the quality of our fellowship experiences to the highest levels. I am forever grateful to Drs. Burton Sobel, Michael Cain, David Kipnis, Alan Weiss, Scott Nordlicht, Allan Jaffe, Edward Geltman, William Bowen, Philip Ludbrook, Alan Tiefenbrunn, Julio Perez, Steven Bergmann, Louis Lange, Dennis Loh, Emil Unanue and William Danforth. I also appreciate the tremendous health system collaboration made possible primarily by BJC’s Michael DeHaven.

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**First Year Cardiology Fellows, July 2017**

We welcome the following physicians to our Cardiovascular Fellowship training program at Washington University School of Medicine:

- **Ankit Bhatia**
  - University of Chicago
- **Brittany Dixon**
  - Duke University
- **Nathan Frogge**
  - University of Chicago
- **Mustafa Husaini**
  - University of Rochester
- **Natasha Kassim**
  - University of Pittsburgh
- **Anandita Kulkarni**
  - Baylor University
- **David Rawnsley**
  - Washington University School of Medicine
- **Prashanth Thakker**
  - Case Western Reserve University
- **Manoj Thangam**
  - University of Texas-Houston
2016 AHA Satellite Symposium
Managing Sudden Cardiac Arrest Risk

The latest research and advocacy efforts to prevent sudden cardiac arrest (SCA) were highlighted at the Cardiovascular Division’s Satellite Symposium held in November during the American Hospital Association’s Scientific Sessions 2016. The program included an overview of SCA along with discussions about some of the leading questions being asked by cardiologists, such as the appropriate use of wearable defibrillators; when to order genetic testing, and when subcutaneous ICD is the right choice for patients.

“Despite our many advances in preventing and treating cardiovascular disease, SCA continues to be a major cause of death in the United States and worldwide,” noted cardiologist Phillip Cuculich, MD, course chair and moderator of the symposium. “We featured the many ways in which we, as heart rhythm specialists, radiologists, geneticists, radiation oncologists, scientists and passionate advocates, can push back against this disease.”

Among the speakers at the symposium was Lindsay Davis, a former Miss Ohio and an HCM patient who now travels the country raising awareness about sudden cardiac arrest and advocating for the teaching of CPR in schools across the country to create a generation of first-responders.

Other faculty presenters from Washington University included: Daniel Cooper MD, director of the EP fellowship program; Marye Gleva, MD, director of the Cardiac Implantable Electronic Device Clinic; Mitchell Faddis, MD, PhD, director of cardiac electrophysiology; Nathan Stitziel, MD, PhD, director of the Center for Cardiovascular Genetics and assistant director of the McDonnell Genome Institute; radiation oncologist Clifford Robinson, MD; and Pamela Woodard, MD, vice chair of clinical and translational research and head of the cardiac CT/MR at Mallinckrodt Institute of Radiology.

Boineau Lecture

Dr. Michael Cain, Vice President for Health Sciences and Dean of the Jacobs School of Medicine and Biomedical Sciences at the University of Buffalo, returned to Washington University in October 2016 as the keynote speaker for the 4th Annual John P. Boineau Memorial Lecture.

Cain, an internationally respected cardiovascular physician-scientist who specializes in cardiac electrophysiology, discussed the “Prevention of Sudden Cardiac Death: Challenges and Opportunities.” Cain completed both a clinical and research fellowship in the Cardiovascular Division and then joined the faculty in 1981, serving as director of the Clinical Cardiac Electrophysiology Lab until 1993. He was then named as director of the Cardiovascular Division and the Tobias and Hortense Lewin Professor of Medicine from 1994 to 2006. While at WU, Cain’s research focused on identifying the electro-physiological and structural determinants of ventricular tachycardia and fibrillation in the setting of healed myocardial infarction or cardiomyopathy.

The Boineau lecture, presented annually by the Cardiovascular Division and the Division of Cardiothoracic Surgery, is named in memory of John P. Boineau, MD, a cardiovascular pioneer at Washington University who passed away in 2011.

Angela Brown, MD, is 2016 Stellar Performer in Health Care

Angela Brown, MD, a hypertension management specialist within the Cardiovascular Division, will receive the 2017 Hugh D. McCulloch Award in February from the Greater St. Louis Division of the American Heart Association. The award is given annually to physicians who help further the mission of the AHA in building healthier lives free of cardiovascular diseases and stroke.

Brown leads the Hypertension Clinic at Washington University/Barnes-Jewish Hospital, educating both patients and healthcare professionals about hypertension and the importance of ongoing management to minimize the risk of cardiovascular disease. She specializes in patients with difficult-to-manage hypertension. In addition to research and patient care, Brown also offers community lectures and educational materials to the public in an effort to increase awareness of hypertension and the importance of regular blood pressure screenings.

“Receiving this award is a tremendous honor, and I am proud to join an elite group of previous award recipients who have set the standard for providing outstanding cardiovascular health care to the St. Louis metro area and region,” says Brown.

Brown earned her medical degree and completed her residency in internal medicine at Washington University School of Medicine.
New guidelines from the American Heart Association and the American College of Cardiology have loosened some restrictions placed on competitive athletes with certain heart conditions.

Cardiologists at Washington University School of Medicine led two of the task forces responsible for updating the guidelines that help doctors decide when it is safe for a heart patient to participate in competitive sports, which encompass anything from high school athletics to Olympic or professional-style competitions.

“The good news is that sudden death in athletes is very rare,” says Alan Braverman, MD, the Alumni Endowed Professor in Cardiovascular Diseases and co-author of the guidelines. “But there are certain types of cardiovascular diseases associated with that risk. The goal of these guidelines is to help doctors recognize when someone has a increased risk of sudden cardiac death and help change activity levels to lower that risk.”

The guidelines also classify sports according to how much load they place on the heart muscle. For example, weight lifting causes a significant increase in blood pressure. Long-distance running increases the volume of blood that the heart pumps. Braverman led the task force revising the guidelines for patients with disorders of the aorta. George Van Hare, MD, the Louis Larrick Ward Professor of Pediatrics, led a second task force that updated guidelines for patients with congenital heart disease.

“All of the submitted abstracts were presented during a poster session, where the energy (and the noise!) level was high! Awards for the best poster presentations went to McKenna Feltes, Development of a ‘Crosslink and Click’ Labeling Strategy for the Study of Post-Lysosomal Cholesterol Trafficking Pathways; Li-Hao (Paul) Huang, Photoactivatable ApoA1 Reveals Blocked High Density Lipoprotein Transit in a Model of Psoriasis; and Xiangyu Zhang, Use of a Nanoparticle Delivery System to Rescue Macrophage Lysosomal Dysfunction in Atherosclerosis.

The Burton E. Sobel Lecture was presented by Christine Seidman, MD, the Thomas W. Smith Professor in Medicine and Genetics at Harvard Medical School and Brigham and Women’s hospital, who spoke on “Mutations, Mechanisms, and Therapies for Cardiomyopathies.”
Samuel Wickline — Building a Legacy

“I’ve always been interested in building new things.” So says Samuel Wickline, MD, who is launching himself into another career after completing a clinical and research fellowship in cardiology and then serving on the cardiovascular faculty at Washington University School of Medicine for the past 30 years. Wickline is headed to Florida, where he will serve as the first director of the University of South Florida’s Health Heart Institute in Tampa.

His excitement is tangible and reflects his lifelong interest in solving problems and fostering collaborative partnerships. That characteristic is the hallmark of his time at Washington University. He is a founding member of the graduate program in biomedical engineering and, with Sandor Kovacs, PhD, MD, and Sal Sutera, PhD, established the first graduate degree-granting program in cardiovascular biomedical engineering. Wickline also launched WU’s first clinical program in stress echocardiography and started one of the first cardiac-specific MRI training and research programs in the United States.

“There was no such program in cardiology prior to this,” he recalls. “We had to create a collaborative industry relationship with Philips Medical Systems, which then sparked an international clinical scientist program that enabled industry researchers to work in other academic labs around the world. This became a model for the way advanced imaging technologies were developed hand in hand with academic researchers and frontline users. For the past two decades, our bench-to-bedside research has focused on developing and commercializing imaging and therapeutic nanotechnologies.”

Wickline’s entrepreneurial mulling of scientific challenges and honing in on what he feels could be useful in medicine or therapy has lead to the birth of several companies. He is excited, too, about the research that his team conducts in nanotechnology. “We started in 1995 to bring practical healthcare-related nanomedicine to the stage of clinical and commercial development,” he says. “This completely changed the course of our research at that time, well before anyone was really considering the advantages of more potent and safer ways to design and deliver new therapeutic agents.”

Wickline acknowledges the impact of his postdoctoral fellowship with physicist James Miller, PhD, who he felt exemplified working at the intersection of engineering, physics, medicine, chemistry and biology. “In so many cases, you have to bring a multidisciplinary approach to solve complex problems,” he says. “I want to continue to do that by creating large collaborative groups focused on cardiovascular challenges such as heart failure, hypertension, vascular disease, and cardio-toxic agents.”

He adds, “I intend to stay in touch with alumni and colleagues because I’ve enjoyed my time here and value all of their contributions to collaborative research projects.”